Erina Heights Public School
Learning from Home - Stage 3

Term	1	2	3	4						
Weeks	1	2	3	4	5	6	7	8	9	10	11

	Monday	Tuesday	Wednesday	Thursday	Friday
9:00	Daily Zoom Meeting	5B Zoom Link	5/6R Zoom Link	6S Zoom Link	
Morning	Literacy Activities	Literacy Activities	Literacy Activities	Literacy Activities	Literacy Activities
	Recess Break				
Middle	**Maths Activities**	**Maths Activities**	**Maths Activities**	**Maths Activities**	**Maths Activities**
	Manga High	**Manga High**	**Manga High**	**Manga High**	**Manga High**
	Lunch Break				
Afternoon	**Let's Visit Canberra!**	**Let's Visit Canberra!**	**Let's Visit Canberra!**	**Let's Visit Canberra!**	**Let's Visit Canberra!**
Optional Activities	Last year, the Office of the Advocate for Children and Young People launched a website called Digital Lunchbreak. Children and young people can learn, create and discover through digital workshops, learning materials, virtual excursions and more. Visit the Digital Lunchbreak website by clicking here www.digitallunchbreak.nsw.gov.au				

Literacy Activities

Stage 3 – Week 6

EXPECTATIONS

'Mistakes are proof that you are trying'

- Do one activity each day.

- If you get stuck, send your teacher a message on Google Classroom.

- You can add extra slides to do your answers, otherwise you can do your work in a Google doc or workbook at home.

- Please Note: These tasks are the same as Stage 2, however, our expectation is that as a Stage 3 student, you will be providing more detailed and extended answers, justifying your reasons and giving examples.

- Submit your work on Google Classroom.

- Do the best you can! 😊

"Somewhere inside all of us is the power to change the world."

- Roald Dahl

THE KIDS SHOULD SEE THIS

Summarising an Article

https://thekidshouldseethis.com/post/waddles-the-duck-gets-a-3d-printed-prosthetic-leg

Learning Intention: To write an effective summary of an article.

What to do?
- Scan the QR code or click the link above to be taken to the website.
- Watch the video and read the article.
- Then watch the YouTube video on this screen showing how to use the 'somebody, wanted, but, so, then, finally' strategy.

Your task:
- Read the example given (next slide) about Waddles the Duck to demonstrate what it should look like.
- Go back to the website and find something interesting to read about and write your own summary using the same 'Somebody, wanted, but, so, then, finally' strategy. There is a slide provided for you.
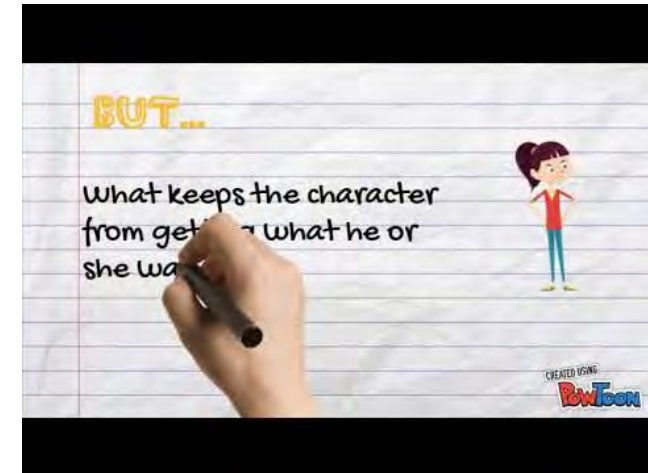
THE KIDS SHOULD SEE THIS

Summarising an Article

Waddles' owner, guitarist (somebody) Ben Weinman wanted Waddles, who only had one leg, to be able to walk again but couldn't have made this happen on his own so he asked pet prosthetic specialist and Bionic Pets owner Derrick Campana if he could help. Then Derrick created Waddles a new leg using a 3D printer. Finally, Waddles was then able to walk again using 2 legs.

Now it's your turn! Go to The Kids Should See This and find your own article to read and write about.

SWBSTF

Somebody
-Who is the main character? What are traits to describe them?

Wanted
-What does the main character want?

But
-What is the problem in the story? What gets in the main character's way?

So
-What does the character do to respond to the problem? What are some attempts to solve the problem?

Then
-How does the character solve the problem? What is the solution?

Finally
-What is the life lesson? What did the main character learn? What is the author trying to teach us?
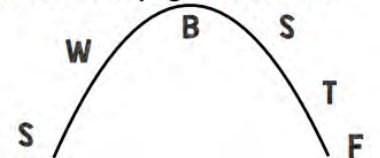
THE KIDS SHOULD SEE THIS

Summarising an Article

Link for Article:

Write your summary here. Don't forget the title of your article.

SWBSTF

Somebody
-Who is the main character? What are traits to describe them?

Wanted
-What does the main character want?

But
-What is the problem in the story? What gets in the main character's way?

So
-What does the character do to respond to the problem? What are some attempts to solve the problem?

Then
-How does the character solve the problem? What is the solution?

Finally
-What is the life lesson? What did the main character learn? What is the author trying to teach us?
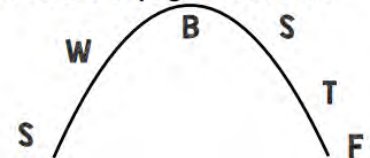
DIRECT & INDIRECT SPEECH

Change the indirect speech into direct speech

Jason said that he didn't want to go to the beach.

"I don't want to go to the beach," said Jason.

Lisa and Natalie said they needed some money for shopping.

<Type>

Ivy told Hannah to stop running.

<Type>

Harry's mum asked him to pick up his toys.

<Type>

Anna asked her teacher if she could play in the sandpit with Scarlett.

<Type>

I yelled out to Dad to tell him that dinner was ready.

<Type>

EDITING - *easy*

DRAG & DROP

Drag the circles and drop them over the words spelled incorrectly.

Sentence	
The baby was crying becos he was hungry.	
Kane denyed he was the one who broke the vase.	
We finaly finished our project.	
The teacher drew a kerved line.	
You must always exercise cortion when swimming in new places.	
Uluru is a famus place in Australia.	
I can see my face in the mirra .	
The bus stoped and the children got on.	
Jake sumtimes surprises his family by making biscuits for them.	
I offen visit my uncle at the weekend.	
Did you notis the red car?	

EDITING - *harder*

DRAG & DROP ⭕

Amy had groan taller over the past year.	
The snowboarders were delayed by a blizzerd.	
Allan liked working with Karen because of her positive atitude .	
Car fumes polloot the air.	
The reporter asked the actor for an opinuin on the movie.	
The family lived in tempory accommodation while their house was being built.	
The teenager seriously injured his right rist when he fell awkwardly.	
The tourist guide was ment to provide clear directions.	
High temperatures tipically occur during the summer months.	
A number of echos sounded eerily throughout the gorge.	
The paddocks were severly damaged by erosion.	

Drag the circles and drop them over the words spelled incorrectly.

WRITING TASK

Writing a recipe

https://www.youtube.com/watch?v=keHkhrEzSyo

What to do:
- Click the link above and watch the video

Do the following:
- Your job will be to write a recipe using the correct format so you will need to take notes first.
- You will need to write down how much of each ingredient and then write down the steps involved in making the cookies.
- Using your notes, write a recipe using subheadings and instructions. Remember to be specific. You need to pretend the person following your instructions has never made these before so they need to know all the details.

Check you writing to ensure correct spelling and punctuation. Also make sure your writing makes sense. It's a good idea to get someone else to read your work too.

WRITING TASK

Chocolate Chip Cookies

Ingredients:

Equipment:

Method:

SPEAKING & LISTENING

Squiz Kids

https://www.squizkids.com.au/podcast/thursday-5-august-2021/

You will need:
- An iPad or laptop

What to do:
- Scan the QR code or click the link to listen to the podcast.

Do the following:
- Listen to the podcast episode from Thursday 4th August.
- You will choose 3 topics from the podcast to talk about with a family member. You may need to take notes while listening.
- Record what you told your family members on the next slide.

SPEAKING & LISTENING

Squiz Kids

I told my family all about…

Type your answer here

Maths
Week 6 Term 3

Maths Instructions:

1. Watch the instructional videos before beginning the tasks. You may need to watch these more than once.

1. Complete 1 or both activities each day - activities can be completed on your slides or on paper or in a book. Please draw any tables or diagrams that you need to complete these activities.

Instructional Video Links

Fractions and Decimals (F&D)

Activity 1 Video

Activity 2 Video
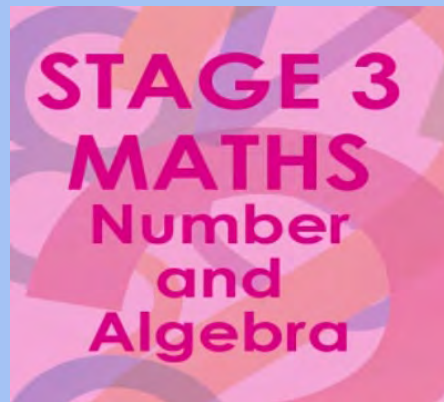
3D Space

Activity 1 Video
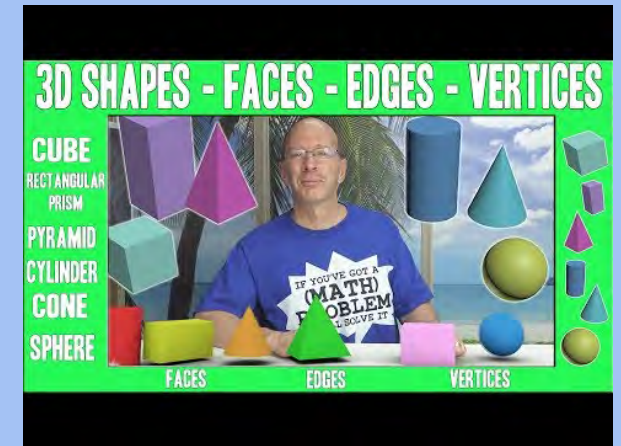
Activity 2 Video

Monday

Ignition Activity – choose your level

Answers for today will be posted at the end of the week

Fractions and Decimals Glossary

Glossary

- **denominator:** the bottom number in a fraction which shows the number of parts a shape, object or collection has been divided into

- **fraction:** a part of a whole or group, represented with a numerator (top number) and denominator (bottom number)

- **hundredth:** one part of a whole that has been divided into a hundred equal parts

- **improper fraction:** a fraction which is greater than one whole, the numerator is greater than the denominator

- **mixed numeral:** a number written as a whole number and a fraction

- **numerator:** the top number in a fraction which shows the number of parts of the whole

- **proper fraction:** a fraction which is smaller than a whole; the numerator is less than the denominator

- **twelfth:** one part of a whole that has been divided into twelve equal parts

- **unit fraction:** a fraction where the numerator is the number 1. This is one part of the whole.
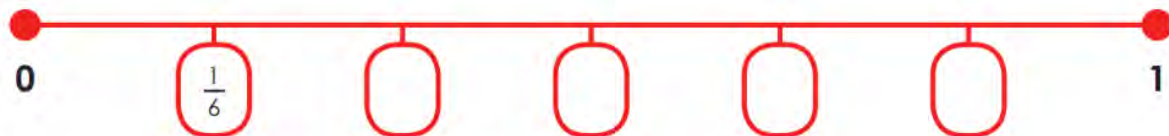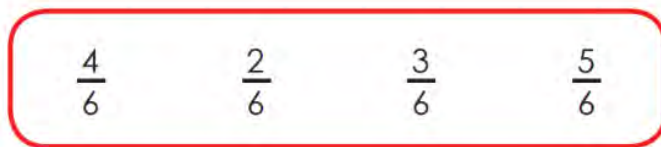
Fractions and Decimal (F&D) Revision

Activity 1- F & D

Fractions with the same denominator can be ordered on a number line. The numerator shows the number of parts of the whole. For example, the fraction $\frac{3}{8}$ means 3 parts of the whole. The higher the numerator, the larger the fraction.

The number line below shows fractions in order between 0 and 1. The digit 1 represents a whole number and it also represents the fraction $\frac{4}{4}$ on the number line. When the numerator and denominator of a fraction are the same it means that the fraction can also be represented as a whole number.
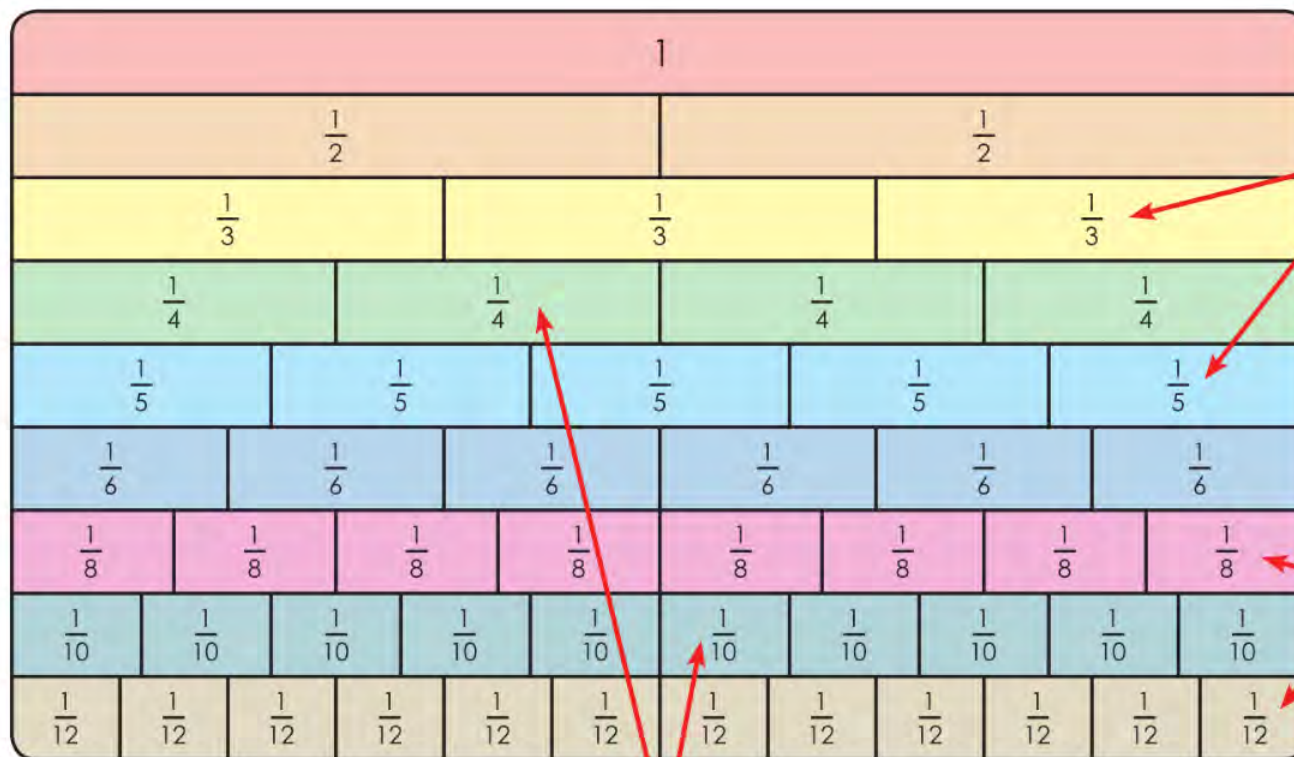
0      $\frac{1}{4}$ $\frac{2}{4}$ $\frac{3}{4}$ 1

1. Put the fractions from the box onto the number line between 0 and 1.

$$\frac{4}{6} \quad\quad \frac{2}{6} \quad\quad \frac{3}{6} \quad\quad \frac{5}{6}$$

0      $\frac{1}{6}$ ◯   ◯   ◯   ◯   1

Activity 1

Look at the fraction wall below which can be used to compare the size of fractions. Read the labels next to the wall comparing the size of different fractions and think about how the denominator changes in both fractions.

$\frac{1}{3}$ and $\frac{1}{5}$ are both 1 part of a whole. $\frac{1}{3}$ is a larger part of a whole so is larger than $\frac{1}{5}$.

$\frac{1}{8}$ and $\frac{1}{12}$ are both 1 part of a whole. $\frac{1}{8}$ is a larger part of a whole so is larger than $\frac{1}{12}$.

$\frac{1}{4}$ and $\frac{1}{10}$ are both 1 part of a whole. $\frac{1}{4}$ is a larger part of a whole so is larger than $\frac{1}{10}$.

Activity 1

Complete the questions below, using the fraction wall to help you. Explain how you found each answer.

1. $\frac{1}{5}$ and $\frac{1}{3}$ are 1 part of a whole. Which fraction is a larger part of a whole? _____

_____

_____

2. $\frac{1}{8}$ and $\frac{1}{12}$ are 1 part of a whole. Which fraction is a larger part of a whole? _____

_____

_____

3. $\frac{2}{8}$ and $\frac{2}{6}$ are parts of a whole. Which fraction is a larger part of a whole? _____

_____

_____

4. $\frac{6}{10}$ and $\frac{4}{5}$ are parts of a whole. Which fraction is a larger part of a whole? _____

_____

_____

Activity 1

4b) Record which fractions are improper fractions.

$$\frac{7}{8} \qquad \frac{10}{8} \qquad \frac{2}{8} \qquad \frac{14}{8} \qquad \frac{6}{8} \qquad \frac{1}{8} \qquad \frac{9}{8}$$

5. Imagine that you have been asked to make an order for cakes. Each cake is divided into 8 pieces. Fill in the lists below with proper and improper fractions.

Cake	Pieces	Fraction
coconut cakes		
caramel cakes		
cheesecakes		
black forest cakes		
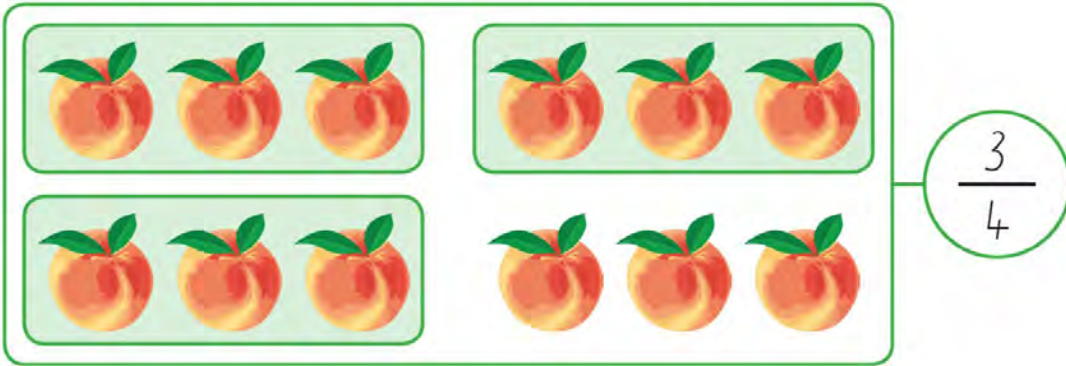
Think about the following questions.

- Which of the fractions from the table above are proper fractions and which are improper fractions?
- How do you know which type of fraction they are?

Activity 2
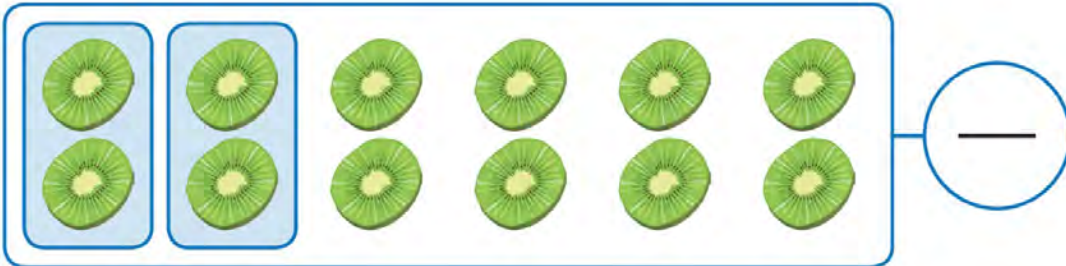
2. Look at the fractions of collections below. How many groups are circled in each collection? Write the fraction for each one. The first one has been completed for you.
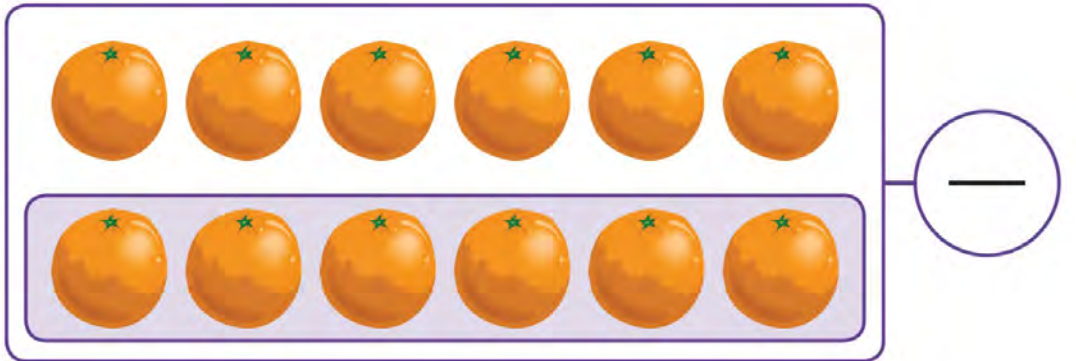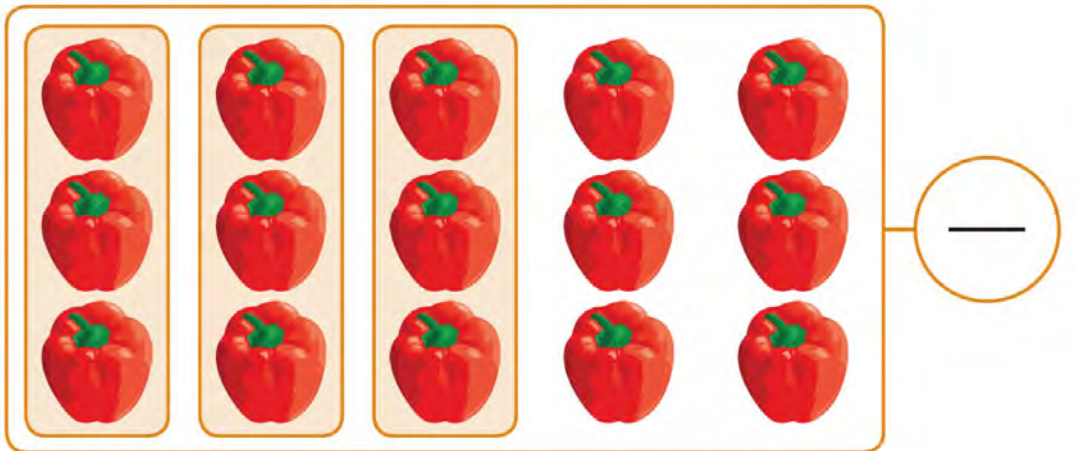
a. $\dfrac{3}{4}$

b. $\dfrac{}{}$

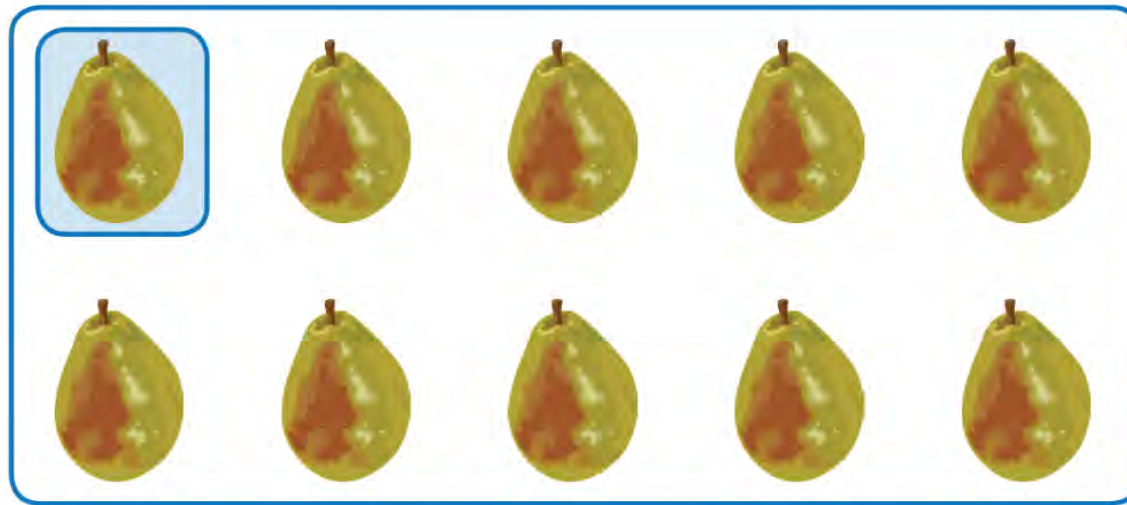c. $\dfrac{}{}$

d. $\dfrac{}{}$

Activity 2

1. Look at the collection of pears below.

a. How many pears in the collection?
b. How many pears are circled?
c. What fraction of the collection is this?

$\frac{1}{10}$ is a unit fraction. If we want to find $\frac{1}{10}$ of the collection then we need to divide the pears into 10 equal groups.

How many are in each group? 1 pear

$\frac{1}{10}$ of 10 is therefore 1.

If the denominator and the number of objects in the collection are the same number then it is easy to work out the unit fraction of a collection.

Activity 2

What if the denominator is different to the number in the collection?

How would we find $\frac{1}{5}$ of 10 pears?

2. Look at the collection below.

a. To find $\frac{1}{5}$ of 10 divide the collection into five equal groups then count how many pears are in each group.

b. How many pears are in each group?

c. Complete this number sentence.

$\frac{1}{5}$ of 10 = _____

Activity 2

Count out 12 items e.g. blocks, buttons etc. How would you find $\frac{1}{3}$ of 12 ?
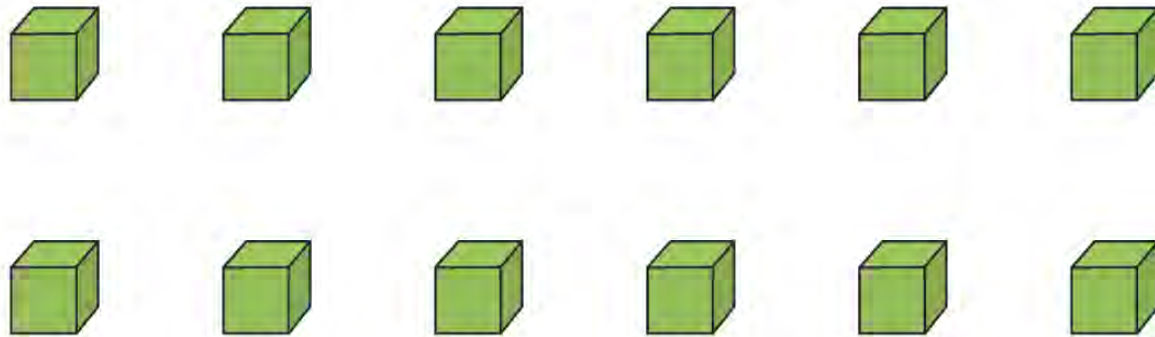
d. Divide your 12 blocks into three equal groups. Alternatively, circle the blocks above to make three equal groups. How many blocks in each group?

There are _____ blocks in each group.

How would you solve this fraction problem without using blocks? What operation could you use?

Activity 2

You could use division!
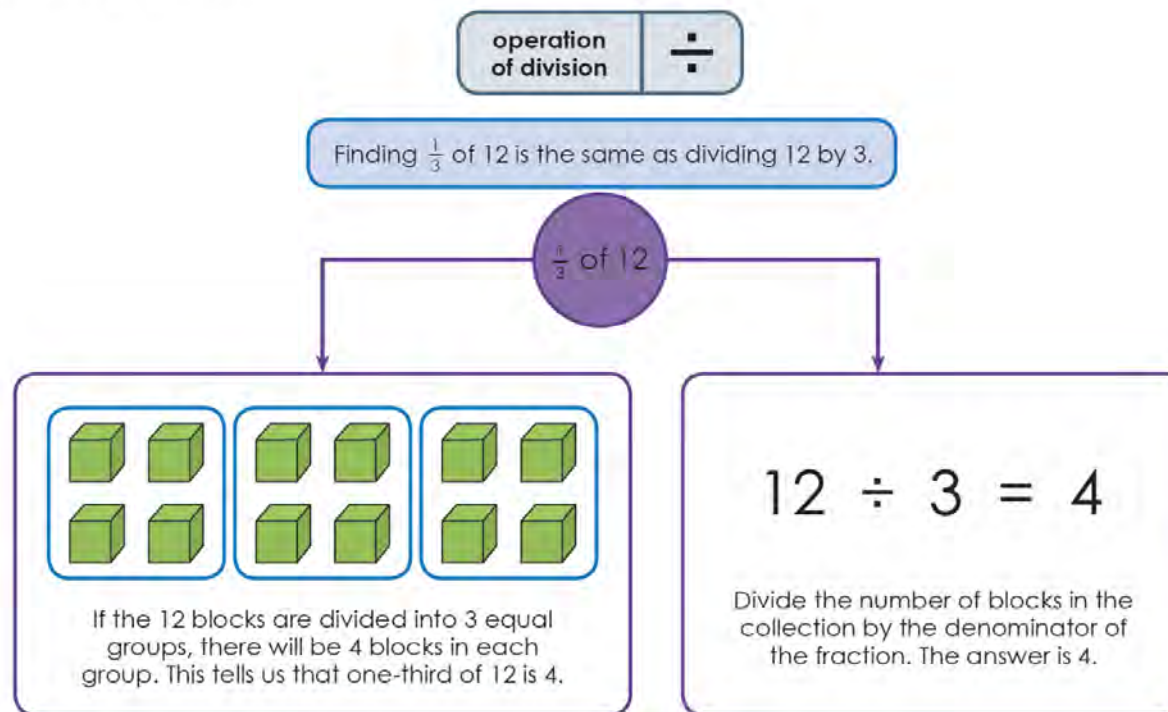
| operation of division | ÷ |

Finding $\frac{1}{3}$ of 12 is the same as dividing 12 by 3.

$\frac{1}{3}$ of 12

If the 12 blocks are divided into 3 equal groups, there will be 4 blocks in each group. This tells us that one-third of 12 is 4.

$$12 \div 3 = 4$$

Divide the number of blocks in the collection by the denominator of the fraction. The answer is 4.

3. Use division to solve the following fraction problems and write the answers in the space provided.

a. $\frac{1}{3}$ of 24

$= 24 \div 3$

$=$

b. $\frac{1}{5}$ of 35

$=$

$=$

c. $\frac{1}{8}$ of 88

$=$

$=$

d. $\frac{1}{4}$ of 100

$=$

$=$

Activity 2

4. Read the story below then solve the word problems by calculating the unit fraction of the collection.

The students of Harbourside Primary School are celebrating Harmony Day. Year 6 Blue, which has 24 students, is taking part in some craft activities. Peter and Anh have been asked by their teacher to get the equipment ready. To do this they need to know how many students are taking part in each activity.
Can you help them solve these problems? The first one has been done for you.

a. $\frac{1}{2}$ of the 24 students are painting flags. They will need one paint brush each.

How many paint brushes are needed altogether?

$$\frac{1}{2} \text{ of } 24$$
$$24 \div 2 = 12 \text{ paint brushes}$$

b. $\frac{1}{8}$ of the 24 students are doing origami. They will need one piece of paper each.

How many pieces of paper are needed altogether?

c. $\frac{1}{6}$ of the 24 students are each tie-dying one bandana.

How many bandanas are needed altogether?

d. The rest of the students are making paper lanterns. They each need a pair of scissors.

How many pairs of scissors will they need?

Tuesday

Ignition Activity – choose your level

Answers for today will be posted at the end of the week

3D Space Glossary

Glossary

- **apex:** the highest or top point above the base of a pyramid or cone

- **base:** the bottom or end face of a solid

- **cross-section:** the shape of a face created by cutting a 3D object parallel to the base

- **edge:** the line formed where two faces meet on a 3D object

- **face:** any flat surface of a 3D object

- **three-dimensional (3D):** an object that has three dimensions: height, width and depth

- **vertex:** a point where three or more edges of a 3D object meet

Activity 1

All 3D objects have two or more faces. Faces are the flat surfaces on 3D objects.

If we count the faces on this cube, we will find that it has 6 faces.
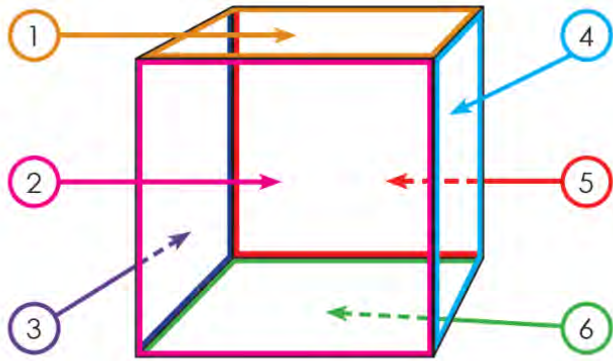
If we count the faces on this square pyramid, we will find it has 5 faces.
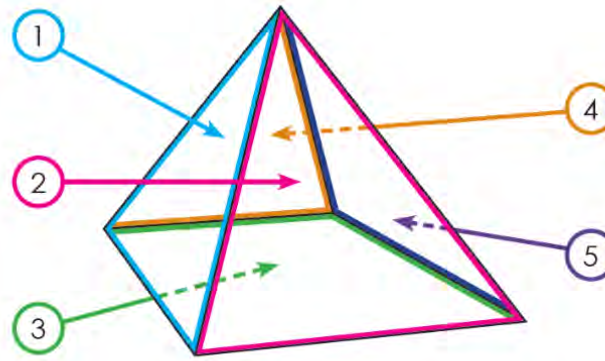
1. Count the faces on these objects, then write the number of faces in the box below each object.

a. triangular pyramid	**b. cube**
Number of faces =	Number of faces =
c. pentagonal prism	**d. octagonal prism**
Number of faces =	Number of faces =
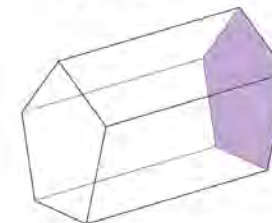
Activity 1

Parallel faces are two faces opposite each other on an object that are exactly the same distance apart at every point.

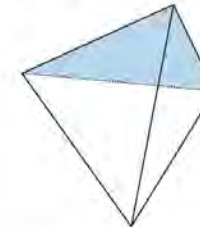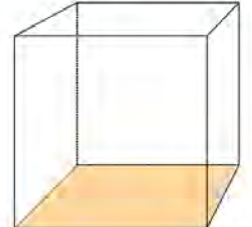

Object a.
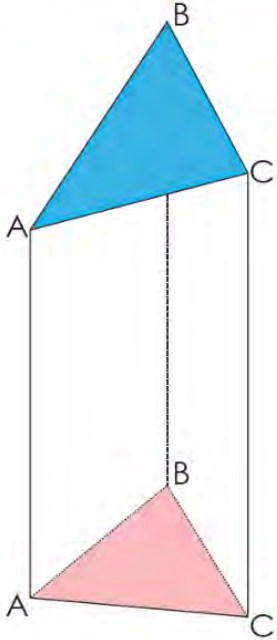
Object b.
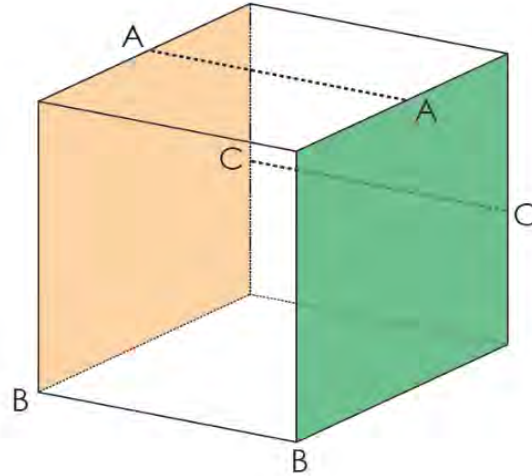
The two coloured faces on object **a** are not parallel. How do we know?

- object **a**. Notice how the distance between each point is different? Parallel faces are the same distance apart at every point, so these faces cannot be parallel.

- The distance between each point on object **b** is the same. This means that the coloured faces are parallel, in fact all the opposite faces are parallel.

Activity 1

3. Number the parallel faces on the prisms below. In the box below each prism, write the number of pairs of parallel faces. The first one has been done for you.

a.

Pairs of parallel faces: 4

b.
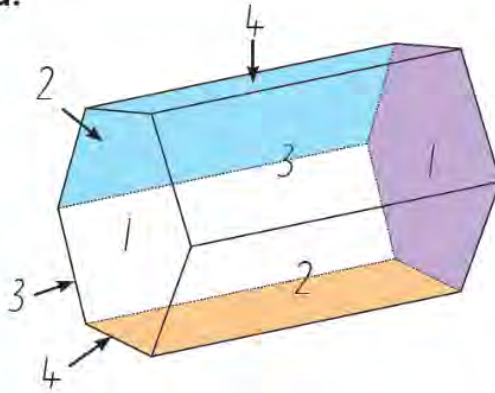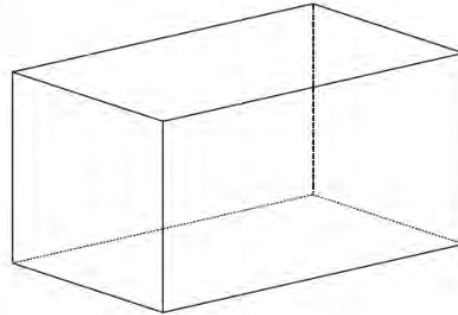
Pairs of parallel faces:

c.
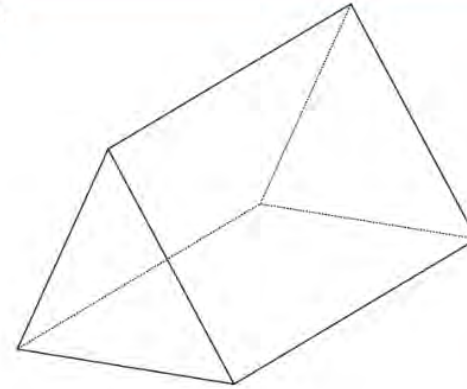
Pairs of parallel faces:

d.
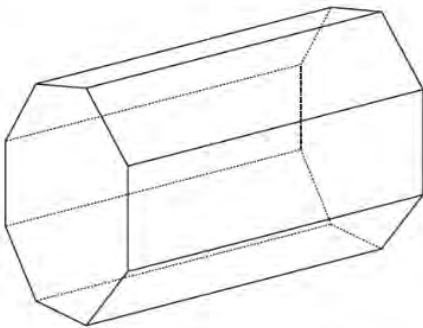
Pairs of parallel faces:

e.
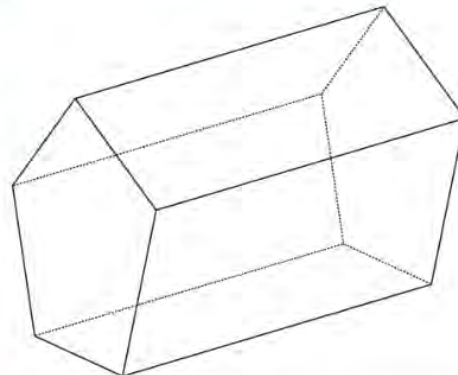
Pairs of parallel faces:

f.
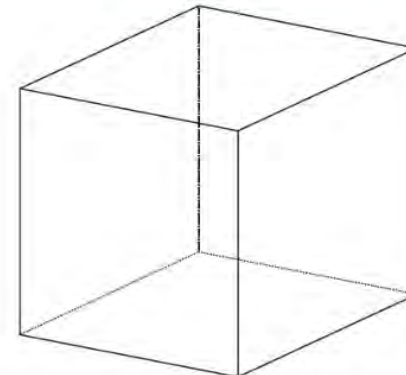
Pairs of parallel faces:

Activity 2

The 3D objects you know such as cylinders, rectangular prisms and pyramids are the basic objects used to build many real-life structures.

Many buildings are rectangular prisms.

Water tanks are cylinders.

This cabin combines a rectangular prism and triangular prism.

Activity 2

The dice in this backgammon set are cubes. The counters are cylinders and the case itself is made from a rectangular prism.

1. Look around you and try to identify the basic 3D objects in structures you can see. List the structures and the 3D objects that they are constructed from in the table below. To get you started, what is the basic object of the desk or table you are sitting at?

Structure	3D objects

Activity 2

1. Draw a line to match each feature to its correct definition.

Edge		Any flat surface of a 3D object.
Vertex		A point where three or more edges of a 3D object meet.
Face		The line formed where two faces meet on a 3D object.

Working Mathematically

I have 6 faces.
I have no parallel faces.
5 of my faces meet at the same point.
The 6th face is opposite the point where the 5 faces meet.

What 3D object am I?

Draw your answer below and any notes needed to justify your answer when making your audio recording for your teacher.

Wednesday

Ignition Activity – choose your level

Answers for today will be posted at the end of the week

ID: 55242   EASY Next Level
EMOJI PUZZLES FOR DEVELOPING MINDS

🦀 + 🦀 + 🦀 = 33
🦐 + 🦀 + 🦀 = 25
🐡 + 🐡 + 🦐 = 7
🐡 × 🦀 + 🦐 = ?
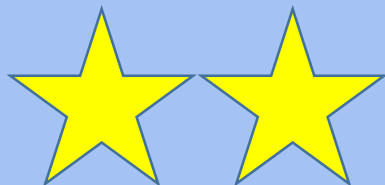
Solvemoji.com

0/0 (0%)

Answer...

ID: 55243   MEDIUM Next Level
EMOJI PUZZLES FOR DEVELOPING MINDS

😺 + 😺 + 😺 = 60
😾 + 😾 × 😺 = 66
🙀 + 😾 × 😿 = 28
😺 + 😿 × 😾 = ?

Solvemoji.com

0/0 (0%)

Answer...

ID: 55234   HARD Next Level
EMOJI PUZZLES FOR DEVELOPING MINDS

🎻 × 🥁 = 90
×   ×
🥁 + 🎤 = 36
=   =
216   120

🥁 × 🪘 + 🎤 = ?

Solvemoji.com

0/0 (0%)

Answer...

Activity 1
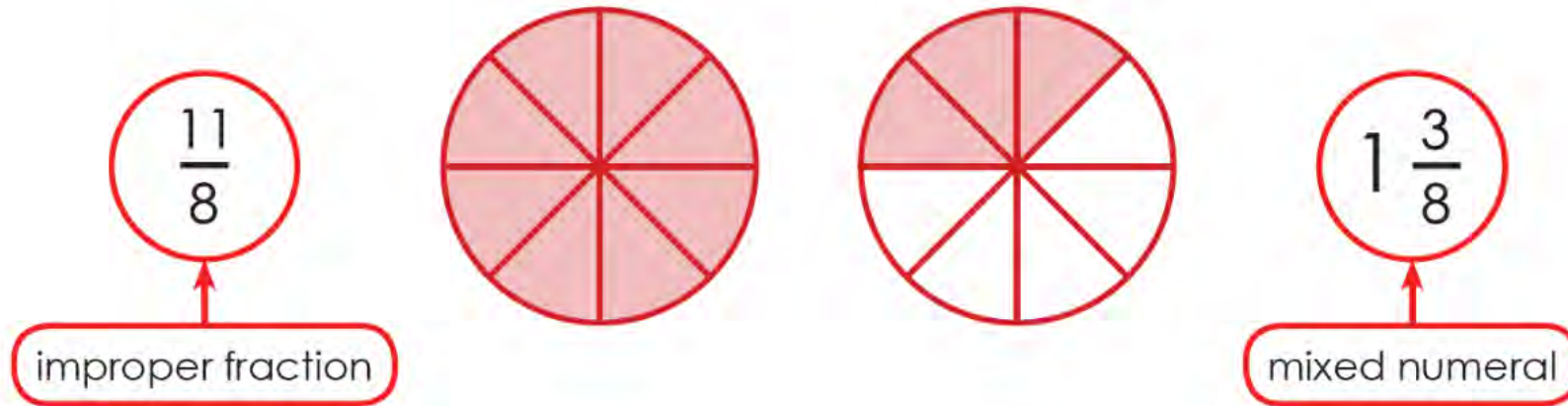
$\dfrac{11}{8}$ → improper fraction

$1\dfrac{3}{8}$ ← mixed numeral

This fraction has 1 whole and $\dfrac{3}{8}$ parts of cake.

Now it is your turn to change improper fractions and mixed numerals. Complete the questions below.

4. Shade $\dfrac{15}{8}$ in the circles below and write it as a mixed numeral in the blank circle.

$\dfrac{15}{8}$

Answer:
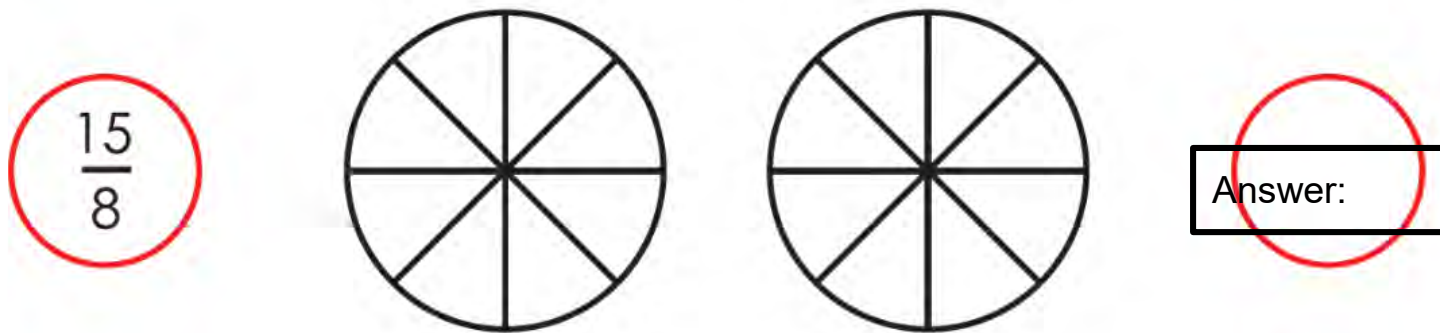
Activity 1

5. Write $1\frac{2}{8}$ as an improper fraction and shade it on the circles below.
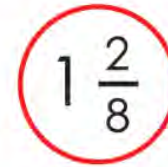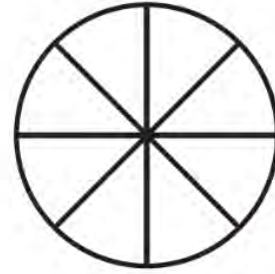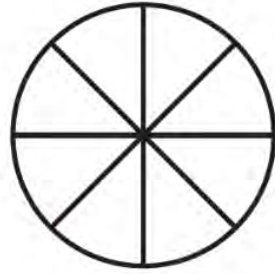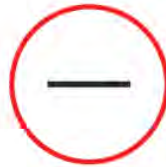
6. Look at the fraction represented on the circles below. Write it as an improper fraction and mixed numeral.

7. Choose an improper fraction. Write it in the circle provided and as a mixed numeral then shade it on the circles.

Activity 1

When you have improper fractions and mixed numerals on a number line, it is easy to see which ones are equivalent (the same). Look at the examples on the number lines below.

The improper fraction $\frac{10}{8}$ is the same as the mixed numeral $1\frac{2}{8}$.

The mixed numeral $1\frac{7}{8}$ is the same as the improper fraction $\frac{15}{8}$.
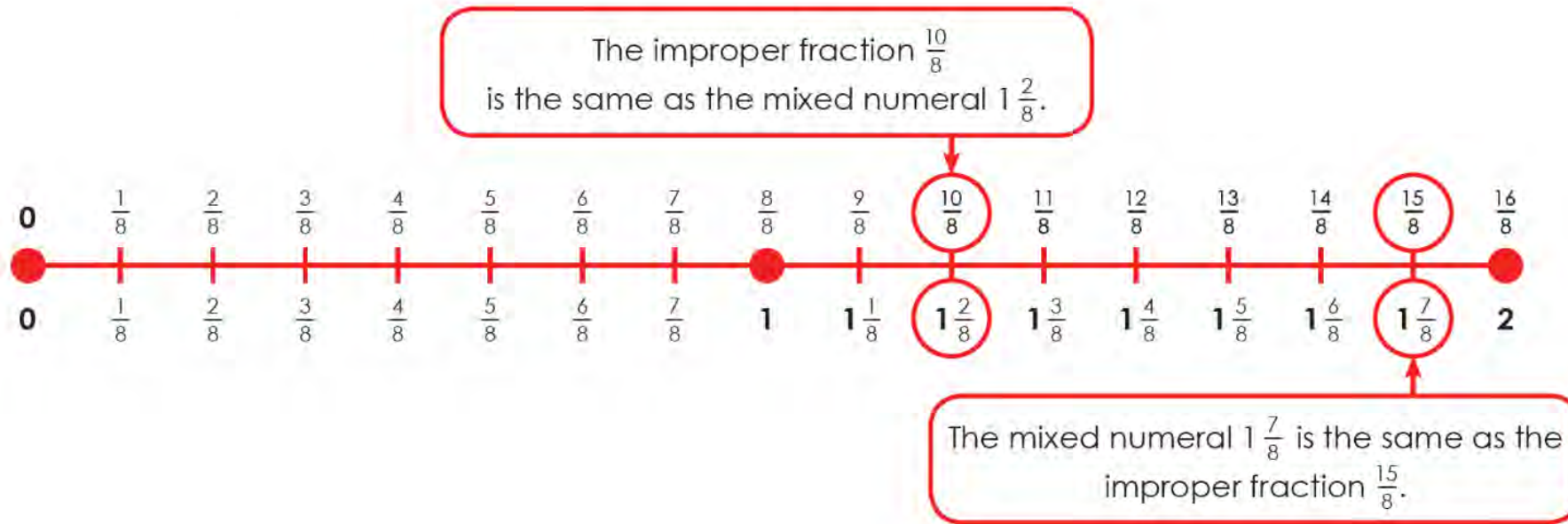
1. Using the number line above, find the following answers.

a. What is the improper fraction that is the equivalent to the mixed numeral $1\frac{4}{8}$? _____

b. What is the improper fraction that is the equivalent to the mixed numeral $1\frac{6}{8}$? _____

c. What is the mixed numeral that is the equivalent to the improper fraction $\frac{11}{8}$? _____

d. What is the mixed numeral that is the equivalent to the improper fraction $\frac{13}{8}$? _____

Question	Your Answer
a	
b	
c	
d	

Activity 2

Another way to work out a fraction of a collection is to use fraction strips. These fractions strips demonstrate how to find $\frac{2}{5}$ of 10.

Step 1: We need to split the whole number 10 into fifths and work out which fraction goes in each part of the strips. This is the same as sharing out 10 into 5 equal parts or dividing 10 by 5.

1 fifth of 10 = (10 ÷ 5) = 2

10									
$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$
$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$	
2		2		2		2		2	
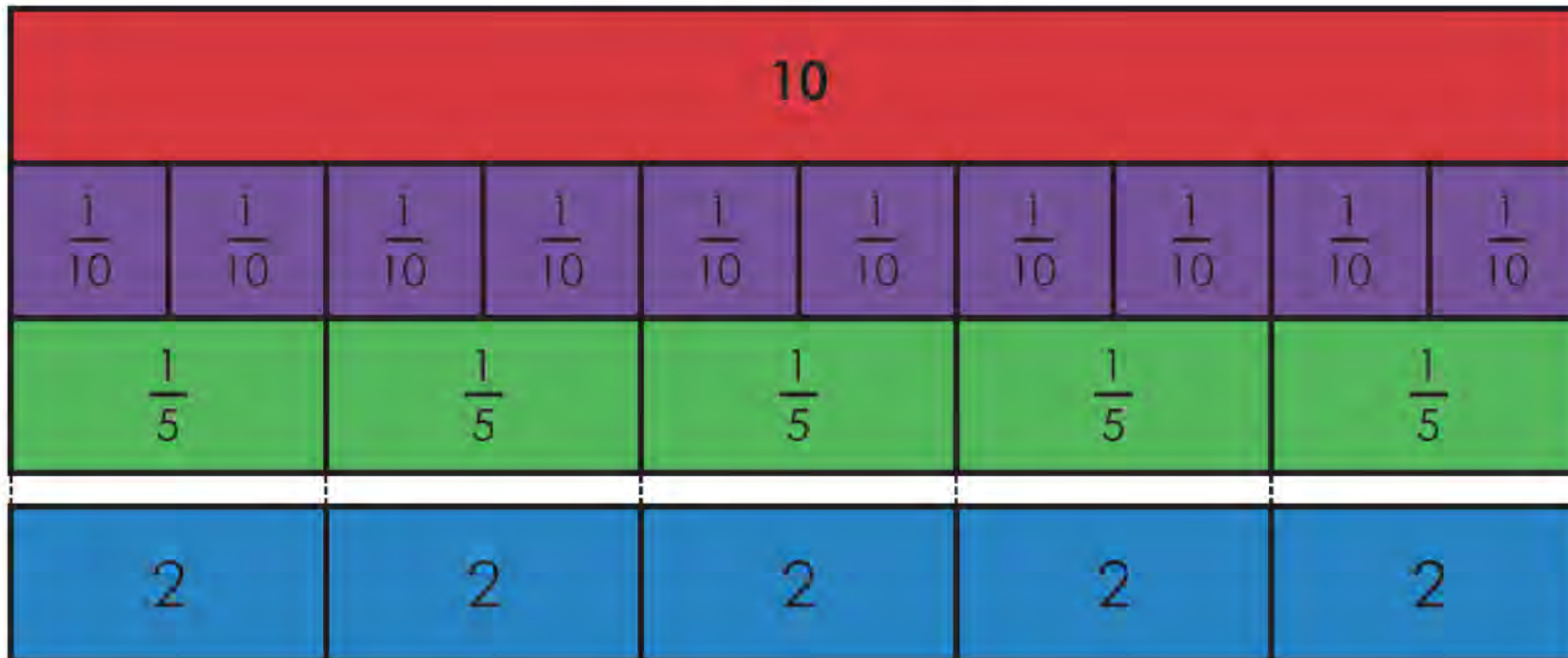
Activity 2

Step 2: Now we have found out $\frac{1}{5}$ of 10, the next step is to find out $\frac{2}{5}$ of 10.

We do this by adding together 2 of the fifths or the number of 2s that have been shaded.

$$\frac{2}{5} \text{ of } 10 = 2 + 2 = 4 \quad \text{Or} \quad \frac{2}{5} \text{ of } 10 = (10 \div 5) \times 2 = 4$$
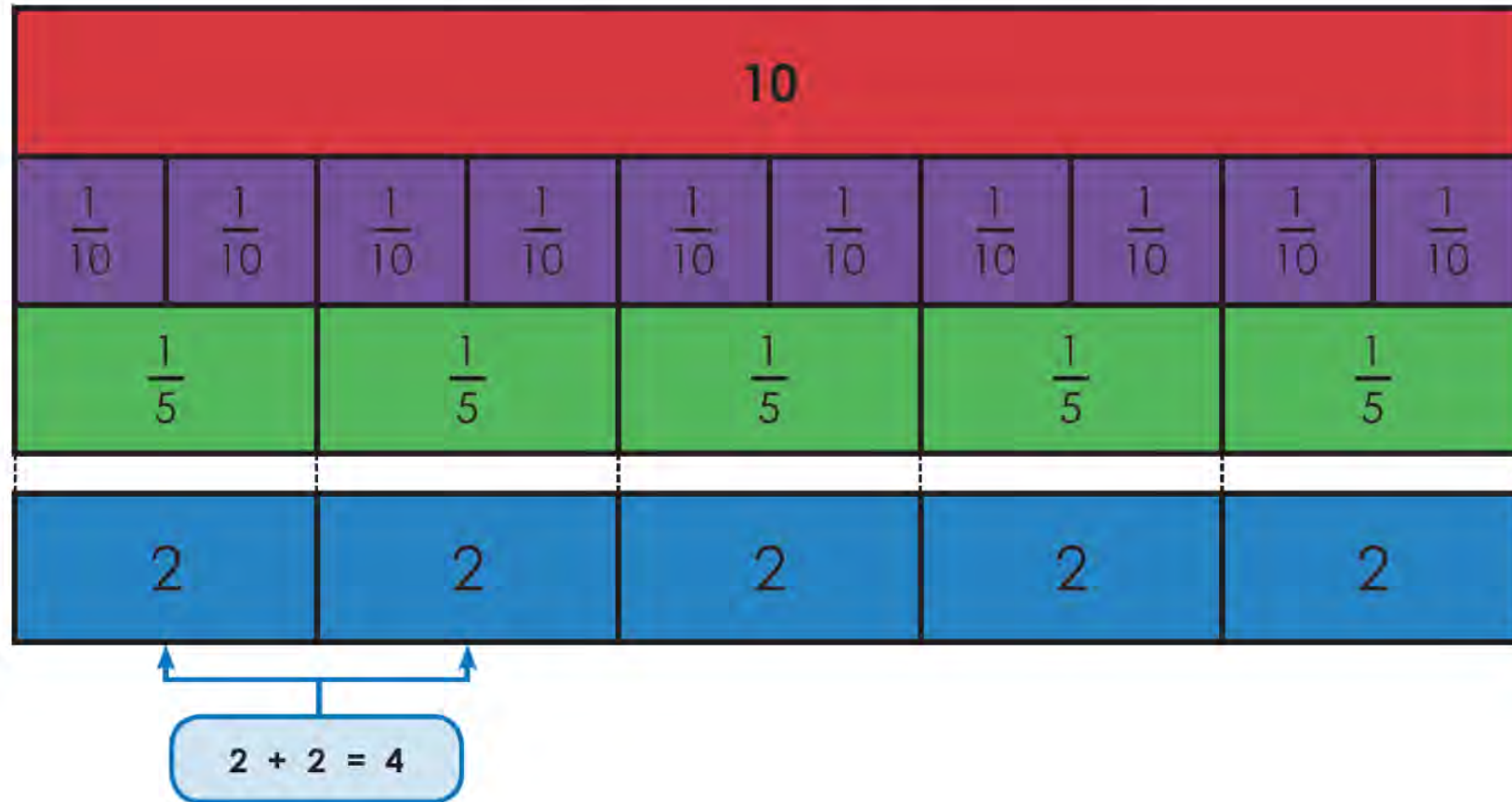
Activity 2

Calculating fractions of a collection can be done using a division sum.

Look at the steps below on how to find $\frac{2}{5}$ of 10.

Calculating simple fractions of a collection

✓	**Step 1**: Find $\frac{1}{5}$ of the collection. Divide the whole number (10) by the denominator.	$\frac{1}{5}$ of 10	$10 \div 5 = 2$
✓	**Step 2**: To find $\frac{2}{5}$, multiply the answer to step 1 by the numerator.	$\frac{2}{5}$ of 10	$2 \times 2 = 4$

The answer to $\frac{2}{5}$ of 10 is 4.

operation of division $\frac{\blacksquare}{\blacksquare}$

Activity 2

A calculator can be used to help you find a fraction of a collection. When we use a calculator to find a fraction, the order that we key in the operations is a little bit different to how you would do it in your head. If you are using a calculator, you would follow the instructions below for finding $\frac{2}{5}$ of 10 .

1. Type the number of the numerator **(2)** into your calculator. →

2. Press the ÷ button. →

3. Type the number of the denominator **(5)** into your calculator. →

4. Press the **x** button. →

5. Type the number of the collection **(10)** into your calculator. You now have your answer which is 4.

King Calculator's sum is: **(2 ÷ 5) × 10 = 4**

Divide the numerator by the denominator then multiply this answer by the number of the collection.

(2 ÷ 5) × 10 = 4

3. Use your calculator to work out the answers to the following fraction problems. Write the answers in the space provided.

a. $\frac{3}{4}$ of 20	**b.** $\frac{5}{6}$ of 36	**c.** $\frac{7}{12}$ of 144	**d.** $\frac{23}{100}$ of 200

Activity 2

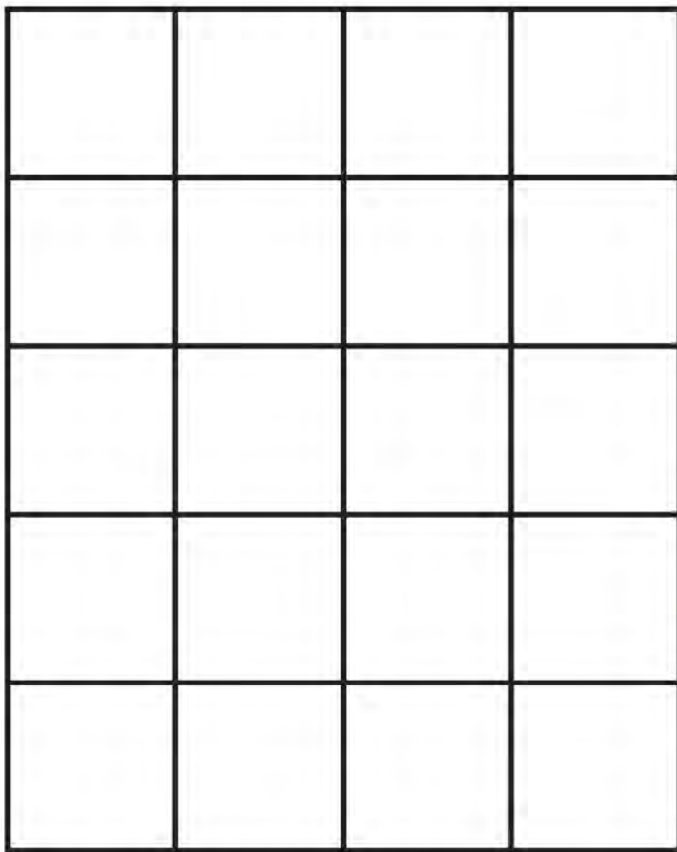**4.** At lunchtime on Harmony Day, some classes at Harbourside Primary set up a display of their completed craft work. The plan of the playground (made up of 20 squares) should show the areas taken up by each class for their display. Colour in the squares used by each class using the information given below. You may use your calculator to help you.

Playground Plan

a. Year 6 Blue used one-quarter of the space. Use a blue pencil to colour in the correct number of squares on the plan.

b. Year 6 Green used two-fifths of the playground. Colour their area green on the plan.

c. Year 5 Red needed to use three-tenths of the playground. Use a red pencil to colour in their area.

d. How much space was left for Year 5 Orange? What fraction of the playground is their area?

Thursday

Activity 1

We name pyramids and prisms according to the shape of their base or bases.

A prism with rectangular bases is a **rectangular prism.**
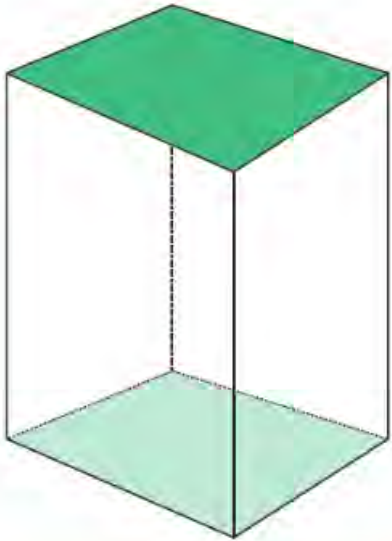
A pyramid with a triangular base is a **triangular pyramid.**
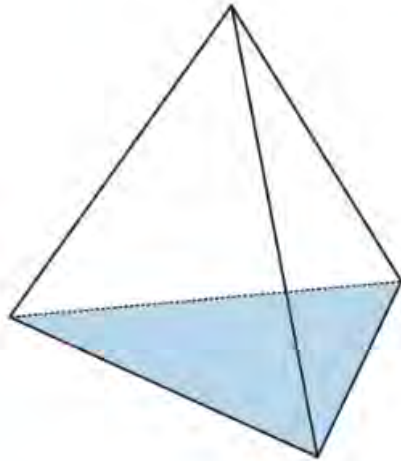
A prism with pentagonal bases is a **pentagonal prism.**
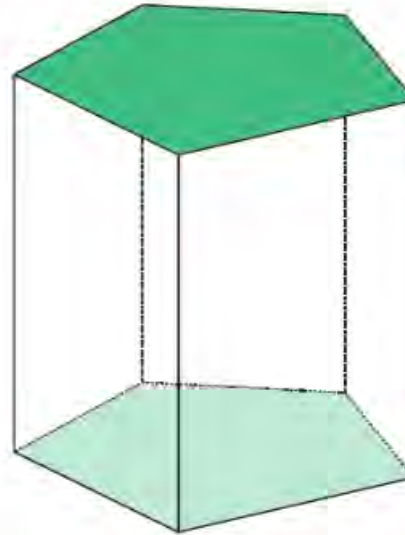
A pyramid with a hexagonal base is a **hexagonal pyramid.**
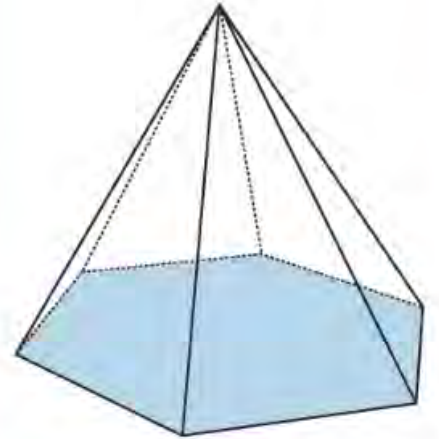
Activity 1

This building in Rome is an octagonal prism.

This pyramid in Paris is a square pyramid.

1. What types of prisms and pyramids are these 3D objects? Name them according to the shape of the base.
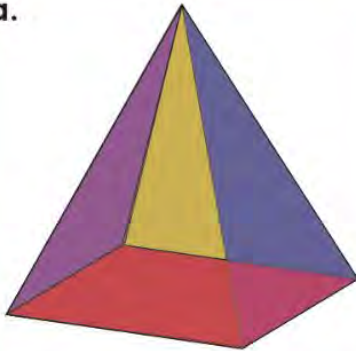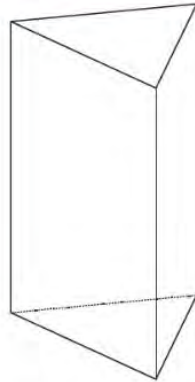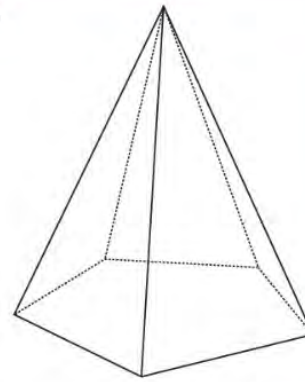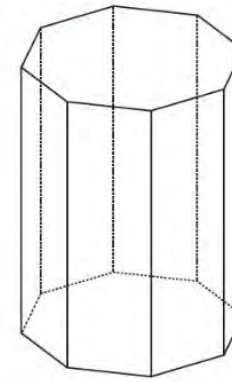
a.	b.	c.	d.
Name:	Name:	Name:	Name:

3D Object- Challenge

Your task is to design and Construct a Robot using 3D Objects that you have either made from a net or found around the house.

2. Sketch a basic design of the model you are going to make. The design should show the 3D objects you are using to make your model. Some examples of design sketches are on the next page.

Some ideas for your design:
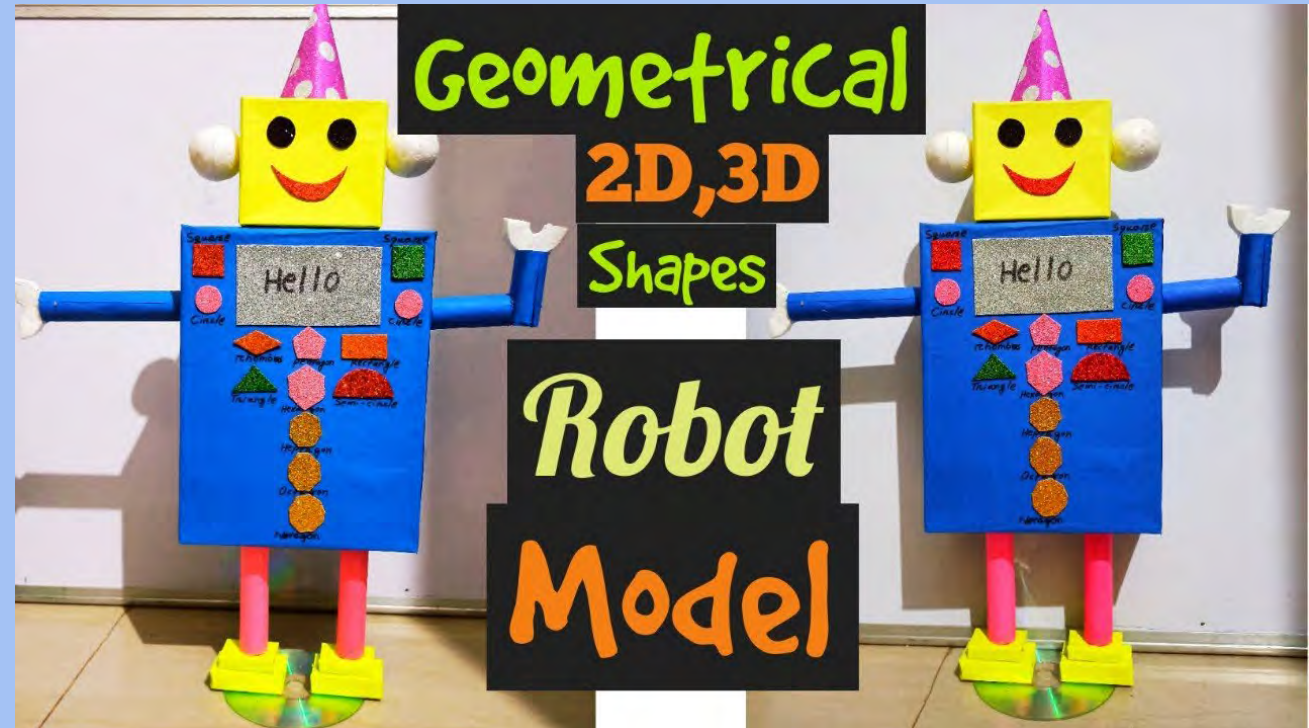
3D Object- Challenge

3. Construct your model, making sure you follow your design.

Tips:

- Boxes of all shapes and sizes are easy to find and make great prisms.
- Cans and bottles can be used for cylinders. (Use plastic bottles and be careful of sharp edges on empty cans.)
- Pyramids can be hard to find, so you may need to make a pyramid out of a net.
- Nets for constructing 3D objects can be found at this website:

www.korthalsaltes.com

4. Once you have finished building your model, take a picture of your model. Send the picture and your design sketch to your teacher.

Friday

Ignition Activity – The Third Dimension

Answers for today will be posted at the end of the week.

The Third Dimension

Age 5 to 11
Challenge Level ★★★

Here are four cubes joined together:
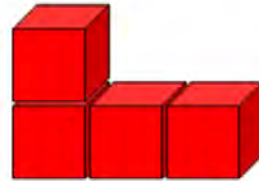
We can draw this arrangement of cubes on dotty paper (isometric paper) which gives us a way of drawing 3D objects more easily:

How many other arrangements of four cubes can you find?
Can you draw them on dotty paper? It's more difficult than it looks!

Activity 1

2. Write the equivalent improper fractions for the following mixed numerals, using the number line below.

a. $2\frac{5}{6}$ _____

b. $3\frac{2}{6}$ _____

c. $2\frac{3}{6}$ _____

d. $3\frac{4}{6}$ _____

$$\frac{12}{6} \quad \frac{13}{6} \quad \frac{14}{6} \quad \frac{15}{6} \quad \frac{16}{6} \quad \frac{17}{6} \quad \frac{18}{6} \quad \frac{19}{6} \quad \frac{20}{6} \quad \frac{21}{6} \quad \frac{22}{6} \quad \frac{23}{6} \quad \frac{24}{6}$$
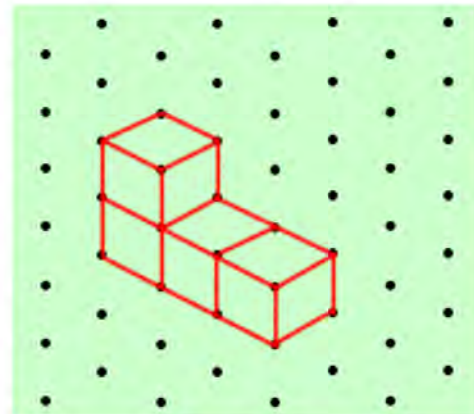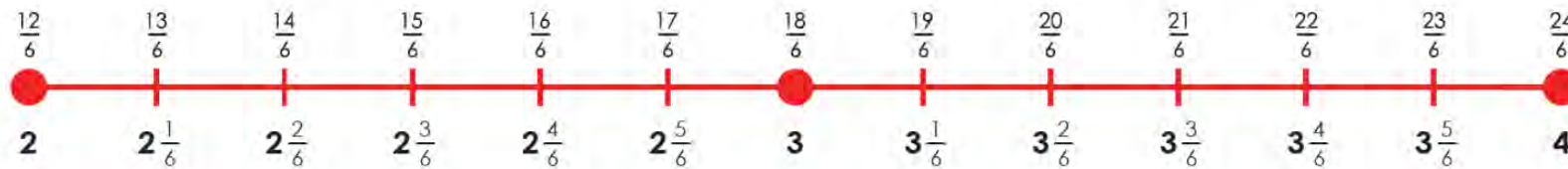
$$2 \quad 2\frac{1}{6} \quad 2\frac{2}{6} \quad 2\frac{3}{6} \quad 2\frac{4}{6} \quad 2\frac{5}{6} \quad 3 \quad 3\frac{1}{6} \quad 3\frac{2}{6} \quad 3\frac{3}{6} \quad 3\frac{4}{6} \quad 3\frac{5}{6} \quad 4$$

3. Write the equivalent mixed numerals for the following improper fractions, using the number line above.

a. $\frac{13}{6}$ _____

b. $\frac{19}{6}$ _____

c. $\frac{16}{6}$ _____

d. $\frac{23}{6}$ _____

4. Write the equivalent improper fractions for the following mixed numerals, using the number line below.

a. $4\frac{1}{3}$ _____

b. $7\frac{2}{3}$ _____

c. $5\frac{2}{3}$ _____

d. $8\frac{1}{3}$ _____

$$\frac{12}{3} \quad \frac{13}{3} \quad \frac{14}{3} \quad \frac{15}{3} \quad \frac{16}{3} \quad \frac{17}{3} \quad \frac{18}{3} \quad \frac{19}{3} \quad \frac{20}{3} \quad \frac{21}{3} \quad \frac{22}{3} \quad \frac{23}{3} \quad \frac{24}{3} \quad \frac{25}{3} \quad \frac{26}{3} \quad \frac{27}{3}$$

$$4 \quad 4\frac{1}{3} \quad 4\frac{2}{3} \quad 5 \quad 5\frac{1}{3} \quad 5\frac{2}{3} \quad 6 \quad 6\frac{1}{3} \quad 6\frac{2}{3} \quad 7 \quad 7\frac{1}{3} \quad 7\frac{2}{3} \quad 8 \quad 8\frac{1}{3} \quad 8\frac{2}{3} \quad 9$$

5. Write the equivalent mixed numerals for the following improper fractions, using the number line above.

a. $\frac{19}{3}$ _____

b. $\frac{26}{3}$ _____

c. $\frac{14}{3}$ _____

d. $\frac{16}{3}$ _____

Activity 1

6. Write the equivalent improper fractions for the following mixed numerals, using the number line below.

a. $2\frac{2}{4}$ _____

b. $1\frac{1}{4}$ _____

c. $2\frac{3}{4}$ _____

d. $1\frac{2}{4}$ _____

7. Write the equivalent mixed numerals for the following improper fractions, using the number line above.

a. $\frac{7}{4}$ _____

b. $\frac{9}{4}$ _____

c. $\frac{5}{4}$ _____

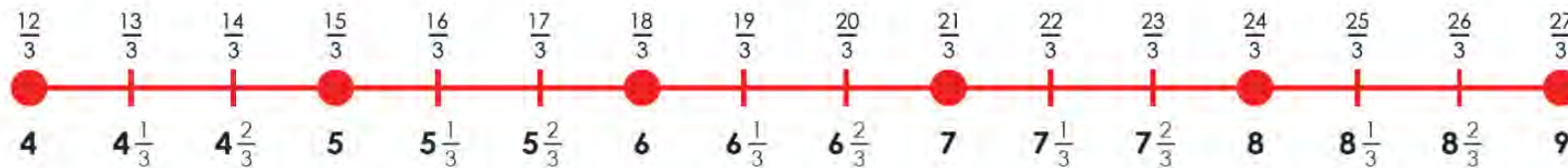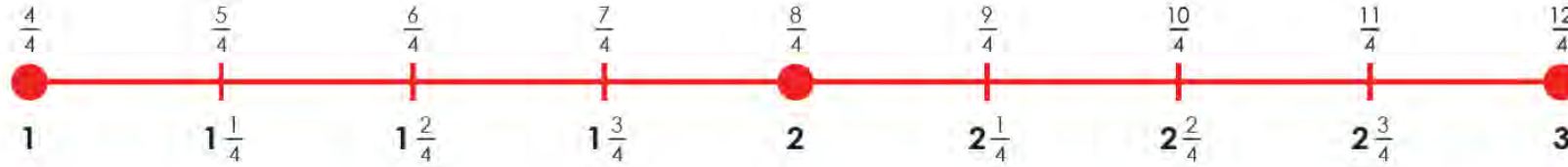**d.** $\frac{11}{4}$ _____

8. Write the equivalent improper fractions for the following mixed numerals, using the number line below.

a. $3\frac{3}{10}$ _____

b. $3\frac{8}{10}$ _____

c. $4\frac{5}{10}$ _____

d. $4\frac{1}{10}$ _____
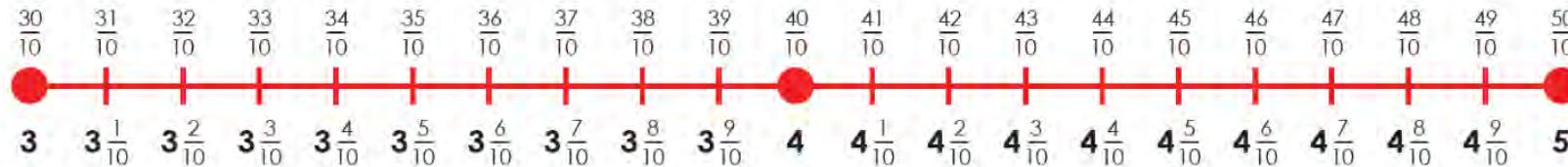
9. Write the equivalent mixed numerals for the following improper fractions, using the number line above.

a. $\frac{36}{10}$ _____

b. $\frac{32}{10}$ _____

c. $\frac{49}{10}$ _____

d. $\frac{44}{10}$ _____

Activity 2

Example: Thirty-two students performed the song My Island Home. There are $\frac{5}{8}$ of the students singing in the choir. The rest of the students are using clapping sticks.

How many students are singing?	How many students are using clapping sticks?
First we need to work out $\frac{1}{8}$ of 32	**32 students take away the 20 that are singing.**
$\frac{1}{8}$ of 32 $32 \div 8 = 4$	$32 - 20 = 12$
so $\frac{5}{8}$ of 32 is $4 \times 5 = 20$ students are singing	so 12 students are using clapping sticks

$\frac{5}{8}$ of 32 = 20 students

$32 - 20 = 12$ students

Activity 2

Solve the following word problems. Show your working.

1. A demonstration of karate is given by twenty-four students. One-third of these karate kids have white belts and $\frac{3}{8}$ of them have green belts. The rest have blue belts.

a. Are there more students with white belts or green belts?

b. How many students have blue belts?

c. The karate teacher wants the blue belts and green belts in the front row for the demonstration. How many students will be in the front row?

Activity 2

2. Forty-two students are performing some Polynesian dances. Half of the students are wearing yellow costumes and $\frac{2}{6}$ are wearing white costumes. The rest of the group are girls wearing traditional red dresses.

a. How many students are wearing yellow?

b. How many students are wearing white?

c. Only the girls wearing traditional red dresses performed the second dance. How many people are on stage for the second dance?

d. For the third dance, two-thirds of the students wearing yellow joined the girls in red dresses on stage. How many students performed the third dance?

Activity 2

Working Mathematically

Restaurant Jean is hosting a special dinner for 60 people.

- One-quarter are eating a main meal of chicken cassoulet
- Five-twelfths are having duck with plum sauce
- Eleven people have requested a vegetarian meal
- The rest of the diners need gluten-free meals.

In the space below, write your answers and any notes needed to justify your answers when making your audio recording.

a. The gluten free meals come with a salad. How many salads will be needed?

b. How many people altogether will be served either chicken or duck?

c. Which dish is more popular, duck or chicken?

d. The diners are divided evenly among 6 tables. What fraction of the collection are on each table?

Optional Weekly Challenge

MAGICAL *mathematics*

You will need:
Pencil and paper

☐ 1. Refer to the magic square example. Add the rows. Add the columns. What did you notice? Write it down.

☐ 2. Add the diagonals. What did you notice?

☐ 3. Create your own 3 x 3 magic square. The columns, rows and diagonals should equal the same amount.

☐ 4. Using the example magic square and your magic square, add them together. Do this by adding the same numbers that have the same position. Produce a new square as your answer.

☐ 5. You now have a new square. What do you notice about this square?

☐ **Extension:** create a magic square using fractions or decimals.

8	1	6
3	5	7
4	9	2

Want more Maths?

You can also go onto Mangahigh or Studyladder

Ask your teacher if you need your login details.

Let's Visit: Questacon SCIENCE MADE FUN!

Watch the video of what to expect when you visit Questacon:

https://canberraexcursions.org.au/questacon

A favourite activity of students at Questacon is the 'Free Fall'. Watch this

https://www.youtube.com/watch?v=ntiwt4CZ37U

Explain the science behind a free fall.

Click on the image to try a cool Science Experiment from Questacon:

What did you learn?

NATIONAL SCIENCE AND TECHNOLOGY CENTRE

Answer your Questacon questions here:

Let's Visit: The Australian Institute of Sport

Click on the image of the Institute of Sport to watch the introductory video. then answer the following questions:

What is your favourite sport and why?

If you could go to the 2032 Olympics in Brisbane and represent your country in any event, what would that event be?

Could you train at the AIS for this event? Why or why not?

The Australian Institute of Sport

Now CLICK HERE to explore the 'Healthy Kids' site from the Australian Institute of Sport.

Complete ONE of these allocated tasks of your choice.

AIS Sport Oval Section: Click on *'I Can Do That'* (Activity 6) and complete the task.

Games Room Section: Click on '*This is Me'* (Activity 1) and complete the task.

Community Garden: Click on *'Pollinator Garden'* (Activity 2) and complete the task.

Canteen: Click on '*Hydration Station'* (Activity 2) and complete the task.

Extension: Complete the *'Design Your Own Athlete Village'* Challenge.

Complete your activity here. Take photos of your project and share these as well.

Let's Visit: The War Memorial
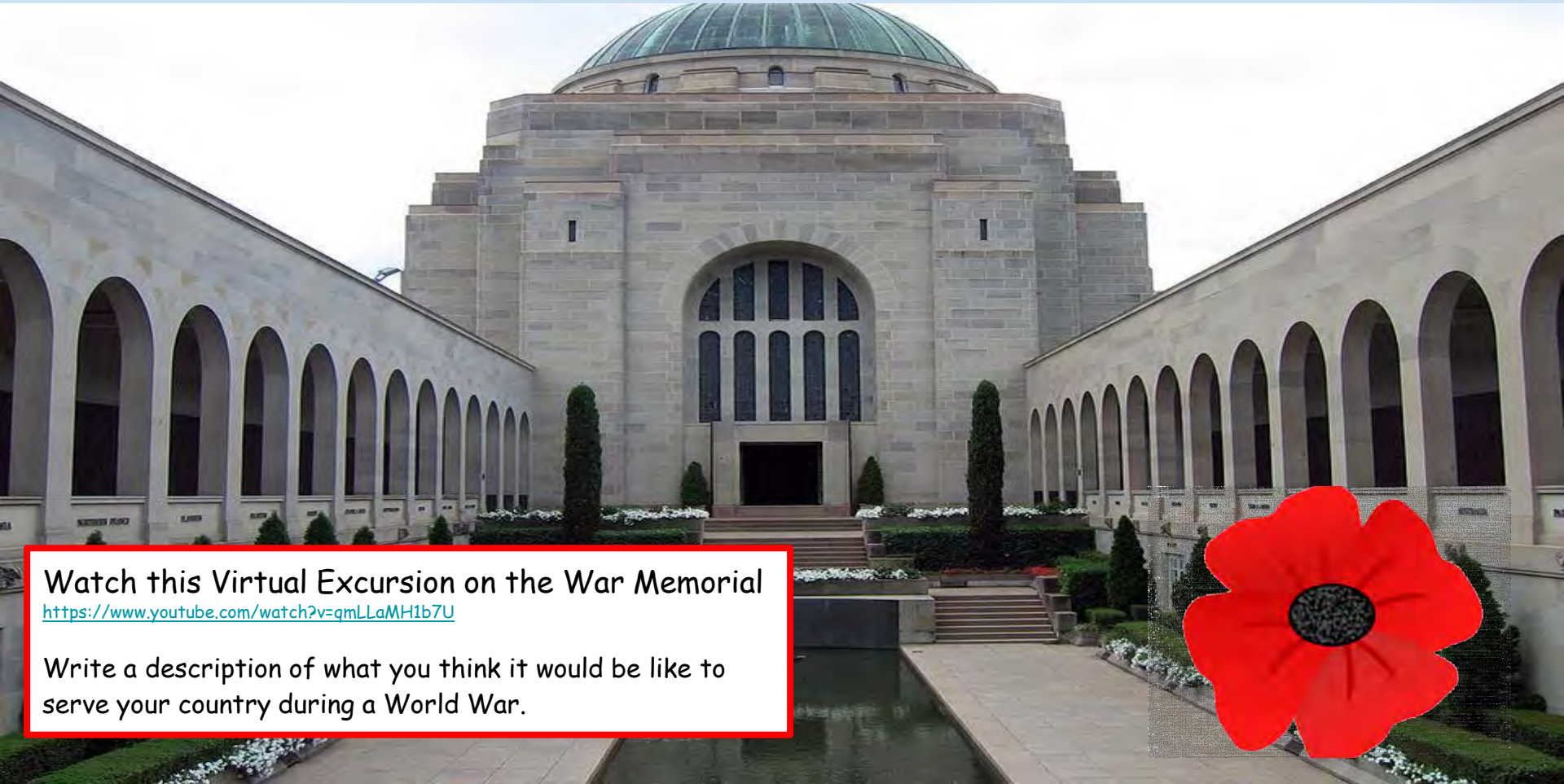
Watch this Virtual Excursion on the War Memorial
https://www.youtube.com/watch?v=qmLLaMH1b7U

Write a description of what you think it would be like to serve your country during a World War.

Write your war description here:

Let's Visit:The National Dinosaur Museum

Welcome to the National Dinosaur Museum

1. Click on the Tyrannosaurus Rex for your virtual tour of the museum.

2. Now watch the following video link to hear some great facts on the history of dinosaurs.

https://www.youtube.com/watch?v=KfsYD2O3QVc

Select your favourite dinosaur.

Write 10 Fascinating Facts about your dinosaur and present it in a ROARSOME interactive poster on the next slide.

Use pictures, colour and other engaging tools like video links and moving graphics.

WHO DOES A DINOSAUR CALL WHEN HE'S BEING ROBBED?
THE TRICERACOPS.

DID YOU KNOW!
Dinosaur bones have been found everywhere except Antarctica.

Make your poster here

Let's Visit:The Royal Australian Mint

CLICK HERE to read some fascinating facts about Australian coins and The Royal Australian Mint.

What is your favourite fact?

After you have read all the fascinating facts about Australian coins and the Royal Australian Mint, try some of the following interactive games and quizzes by clicking on the 2 dollar coin.
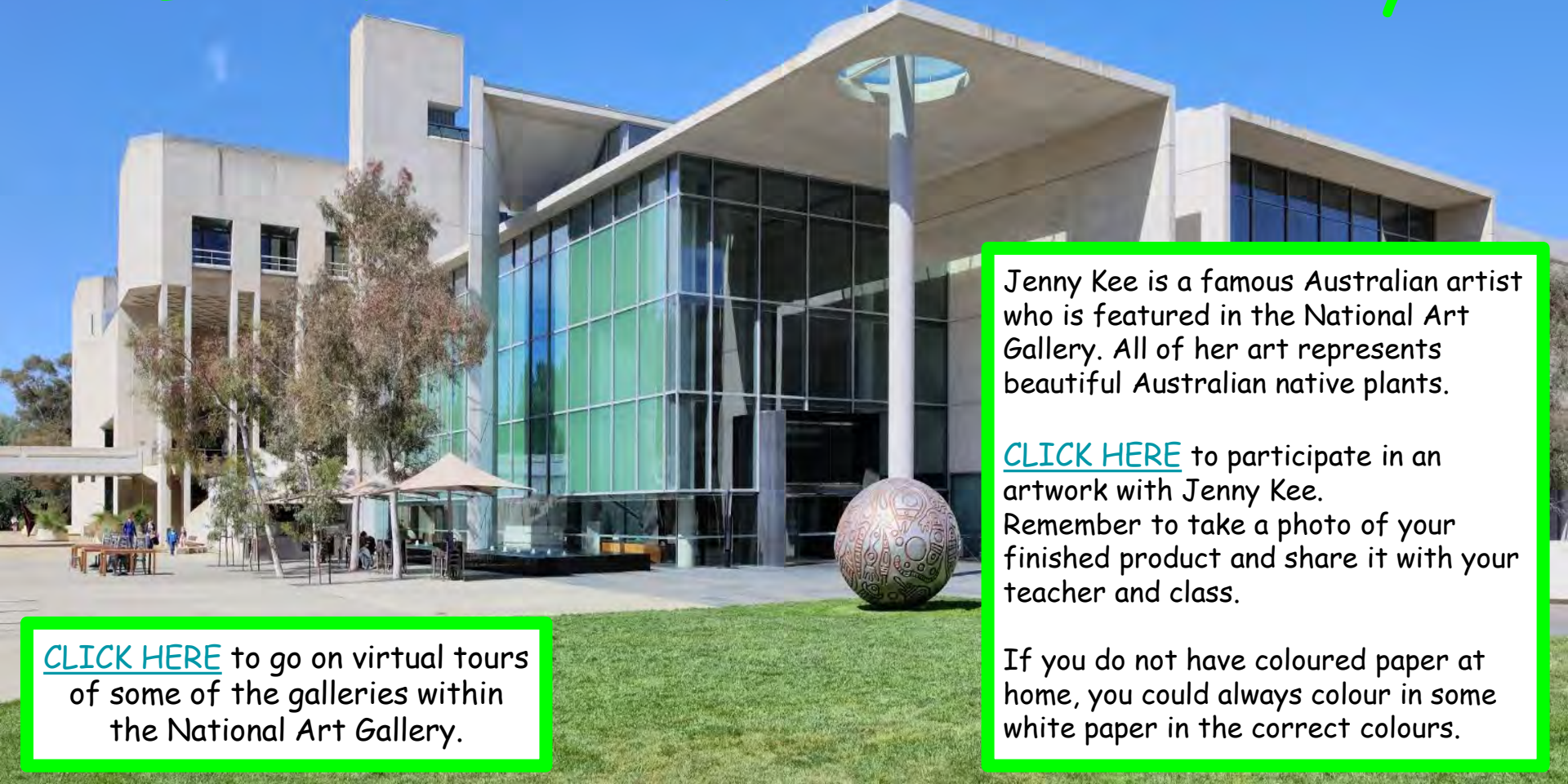
Who is the man featured on the Australian $2 coin?

Why is he so important to our history?

Answer the Mint questions here:

Let's Visit: The National Art Gallery

Jenny Kee is a famous Australian artist who is featured in the National Art Gallery. All of her art represents beautiful Australian native plants.

CLICK HERE to participate in an artwork with Jenny Kee.
Remember to take a photo of your finished product and share it with your teacher and class.

If you do not have coloured paper at home, you could always colour in some white paper in the correct colours.

CLICK HERE to go on virtual tours of some of the galleries within the National Art Gallery.

Show your artwork here:

Erina Heights Public School
Learning from Home - Stage 3

Term	1	2	3	4							
Weeks	1	2	3	4	5	6	7	8	9	10	11

	Monday	Tuesday	Wednesday	Thursday	Friday
9:00	Daily Zoom Meeting	5B Zoom Link	5/6R Zoom Link	6S Zoom Link	
Morning	Literacy Activities	Literacy Activities	Literacy Activities	Literacy Activities	Literacy Activities
	Recess Break				
Middle	Maths Activities	Maths Activities	Maths Activities	Maths Activities	Maths Activities
	Manga High	Manga High	Manga High	Manga High	Manga High
	Lunch Break				
Afternoon	A Week of STEM	A Week of STEM	A Week of STEM	A Week of STEM	A Week of STEM
Optional Activities	Last year, the Office of the Advocate for Children and Young People launched a website called Digital Lunchbreak. Children and young people can learn, create and discover through digital workshops, learning materials, virtual excursions and more. Visit the Digital Lunchbreak website by clicking here www.digitallunchbreak.nsw.gov.au				

Literacy Activities
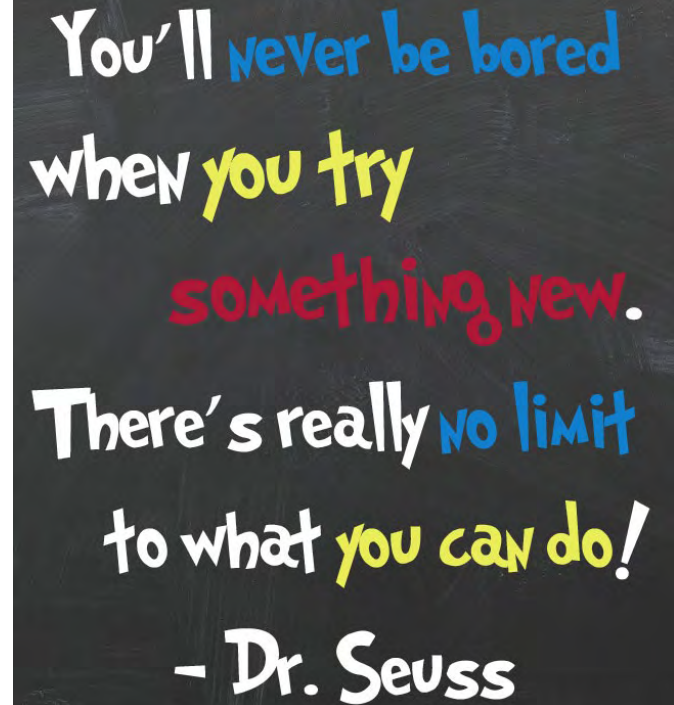
Stage 3– Week 7

EXPECTATIONS

'Strive for progress, not perfection'

- Do one activity each day.

- If you get stuck, send your teacher a message on Google Classroom.

- You can add extra slides to do your answers, otherwise you can do your work in a Google doc or workbook at home.

- **Please Note:** These tasks are the same as Stage 2, however, our expectation is that as a Stage 3 student, you will be providing more detailed and extended answers, justifying your reasons and giving examples.

- Submit your work on Google Classroom.

- Do the best you can! ☺

You'll never be bored when you try something new. There's really no limit to what you can do!

- Dr. Seuss

KIDS NEWS

Plastics a major danger to our green and loggerhead turtles

https://www.kidsnews.com.au/animals/plastics-a-major-danger-to-our-green-and-loggerhead-turtles/news-story/635107c1cd6b369681f21d62e7d0b217

What to do?

- Scan the QR code or click the link above to be taken to the website.

Answer these questions on the next slide:

- What percentage of loggerhead turtles had ingested plastics off the Queensland coast?
- Which turtles are thought to be most at risk and why?
- How many marine species are estimated to have interacted with plastics?
- One turtle off the Indian Ocean was found containing how many pieces of plastic?
- What kind of plastic was more commonly found in the Pacific Island turtles?

Extension

How can you reduce plastic waste polluting our oceans. Answer this on slide 5.

KIDS NEWS

Plastics a major danger to our green and loggerhead turtles

What percentage of loggerhead turtles had ingested plastics off the Queensland coast?

<Type>

Which turtles are thought to be most at risk and why?

<Type>

How many marine species are estimated to have interacted with plastics?

<Type>

One turtle off the Indian Ocean was found containing how many pieces of plastic?

<Type>

What kind of plastic was more commonly found in the Pacific Island turtles?

<Type>

KIDS NEWS - Extension

What can you do to reduce plastic waste in our oceans?

Think of five big ideas for reducing the plastic waste polluting our oceans and record them in the first column below.In the second column, pretend you are in government and explain how you would implement these actions. There is an example done for you.

Ways to reduce plastic waste.	What would I do if I were in government to implement this action.
Use biodegradable packaging for foods at takeaway cafes at surf clubs. No plastic to be used.	Make it a law that surf club takeaways are only allowed to use biodegradable packaging for their takeaway items.

VOCABULARY

Definitions, Synonyms & Antonyms

Complete the table below. Do not copy and paste the definition, it **MUST** be in your own words.

Word	Definition	Two Synonyms	One Antonym
Enemy		1. 2.	1.
Disagree		1. 2.	1.
Crowd		1. 2.	1.
Common		1. 2.	1.
Obvious		1. 2.	1.
Misfortune		1. 2.	1.

LITERACY GAMES

Practise your reading and typing skills   – 20 minutes.

Click the images to access the games.

In this game you need to read the text in the cloud and then work out which tree has the correct main idea.

To play this game, you need to read the sentence at the top of the screen and then grab any supporting evidence in the game. You press 'g' to grab the evidence.

This is a typing practise game. You type the words as quickly as you can to beat your opponent.

WRITING TASK - Idioms

An idiom is a word or phrase which means something different from its literal meaning.

For example:
- She spilled the beans
- Once in a blue moon

Your Task:
Find the meanings of the following idioms. You may research their meanings on the internet.

Idiom	Meaning
Eats like a bird	
She let the cat out of the bag	
When pigs fly	
I'm on top of the world	
It's a piece of cake	
I smell a rat	
Back to the drawing board	

GRAMMAR

Use the code to colour the picture. You can drag and drop the colours onto the picture.

Tip:
When you drag and drop the colours, they won't fill the shape but that is ok. It will be like putting a coloured counter on the words.

GREEN Abstract Nouns	
PINK Collective Nouns	
BLUE Proper Nouns	
YELLOW Pronouns	
PURPLE Verbs	
ORANGE Adverbs	
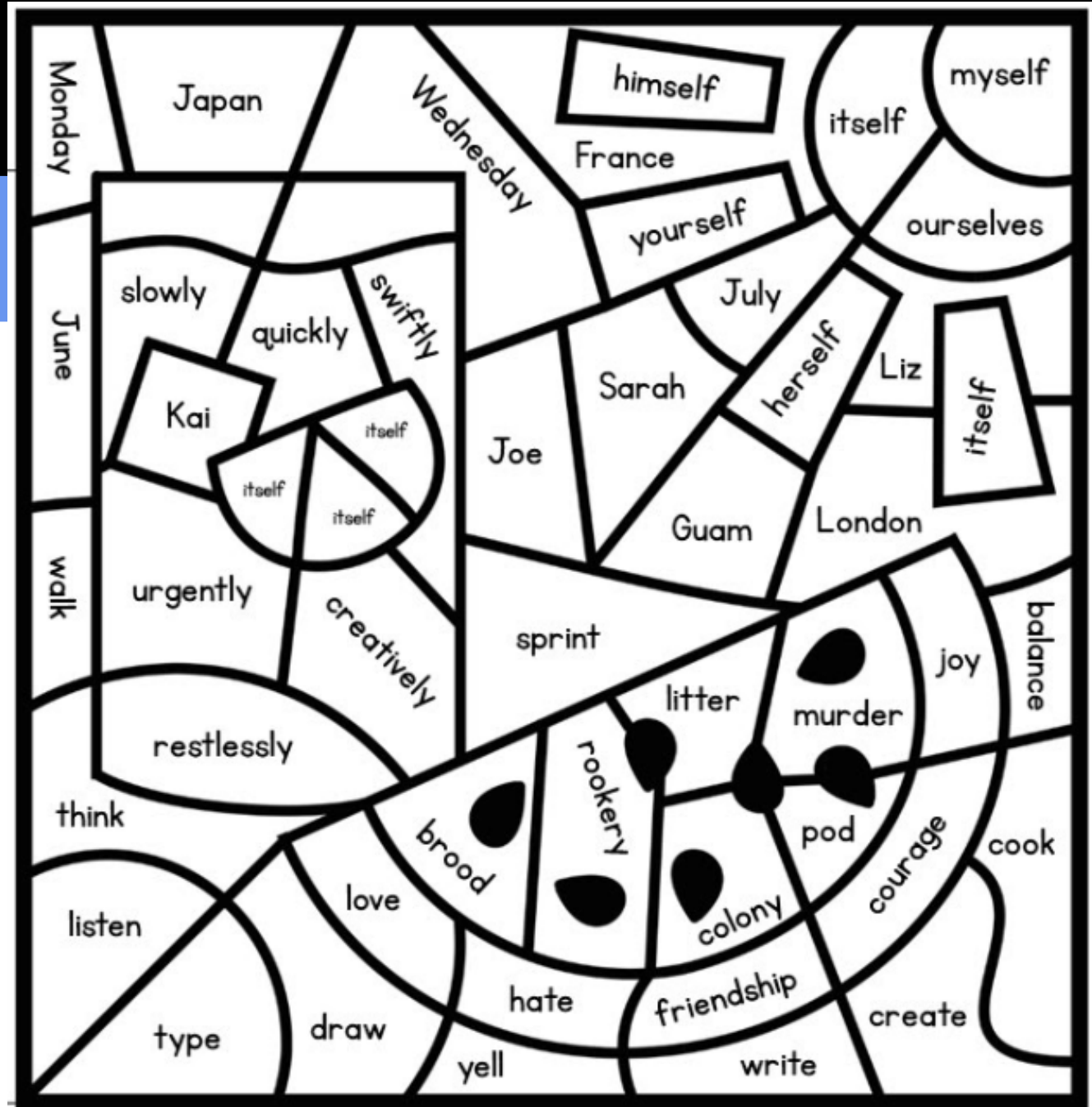
Maths
Week 7 Term 3

Maths Instructions:
1. Watch the instructional videos before beginning the tasks. You may need to watch these more than once.

1. Complete 1 or both activities each day - activities can be completed on your slides or on paper or in a book. Please draw any tables or diagrams that you need to complete these activities.

Instructional Video Links

Fractions and Decimals

Activity 1 Video

Fractions and Decimals Y5 ...
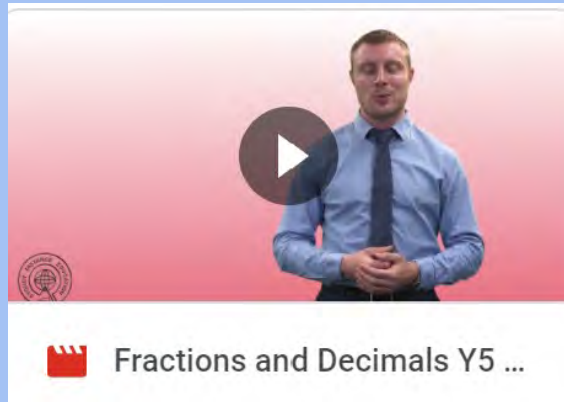
Activity 2 Video

3D Objects

Activity 1 Video

Cross Sections
LINCOLN LEARNING SOLUTIONS

Activity 2 Video

Parallel Intersecting Perpendicular

Monday

Ignition Activity – choose your level

Answers for today will be posted at the end of the week

EASY (★) — ID: 55291 — EMOJI PUZZLES FOR DEVELOPING MINDS

$$🍌 + 🍌 + 🍌 = 9$$
$$🍌 + 🍑 + 🍑 = 25$$
$$🍑 + 🍑 + 🍍 = 34$$
$$🍌 × 🍑 + 🍍 = ?$$

Solvemoji.com — 1/1 (100%) — Answer...

MEDIUM (★★) — ID: 55271 — EMOJI PUZZLES FOR DEVELOPING MINDS

$$🍧 + 🍬 = 22$$
$$× \quad +$$
$$11 × 🍦 = 88$$
$$= \quad =$$
$$132 \quad 18$$

3 = d	9 = t
4 = k	10 = b
6 = v	11 = e
8 = l	12 = a

🍧 🍬 🍦 e

Solvemoji.com — 2/2 (100%) — Answer...

HARD (★★★) — ID: 55286 — EMOJI PUZZLES FOR DEVELOPING MINDS

$$😰 + 😄 = 30$$
$$+ \quad ×$$
$$😑 + 🥶 = 25$$
$$= \quad =$$
$$27 \quad 180$$

$$😄 + 😑 + 😰 = ?$$

Solvemoji.com — 1/1 (100%) — Answer...

3D Space Glossary

Glossary

- **apex:** the highest or top point above the base of a pyramid or cone

- **base:** the bottom or end face of a solid

- **cross-section:** the shape of a face created by cutting a 3D object parallel to the base

- **depth:** the dimension of a 3D object inwards from its surface

- **edge:** the line formed where two faces meet on a 3D object

- **face:** any flat surface of a 3D object

- **net:** a 2D shape that can be folded to make a 3D object

- **parallel:** pairs of lines or faces that are always exactly the same distance apart

- **section:** a cut through an object that is not the same size and shape as the base

- **three-dimensional (3D):** an object that has three dimensions: height, width and depth

- **uniform cross-section:** a cross-section that is the same size and shape throughout a 3D object

- **vertex:** a point where three or more edges of a 3D object meet

Cross sections

Watch the video:

If the cross-section is parallel to a base of a prism, it will be the same size and shape.

Cutting the tree exposes the cross-section of the trunk.

This picture shows the square cross-sections of beams of wood.

Cross sections

Look at the diagrams below. They are prisms with cuts
(in red) parallel to the base. These two prisms have been cut to show
their cross-sections.

The cuts have been made parallel to the bases.
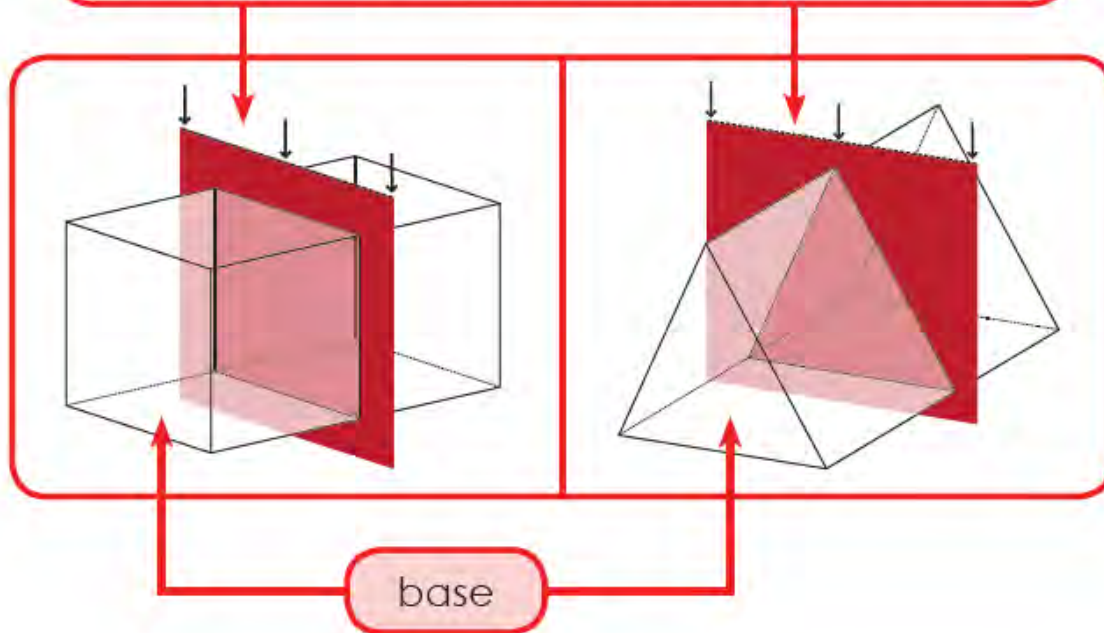
base

When the faces of the cross-sections are parallel to the base and are the same size and shape, they are **uniform cross-sections**.
All prisms have uniform cross-sections.

Activity 1

Now it's your turn.

2. Draw the shape of each cross-section. The first one has been done for you.

a.
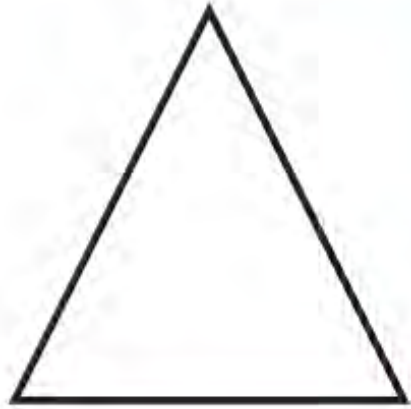
b.
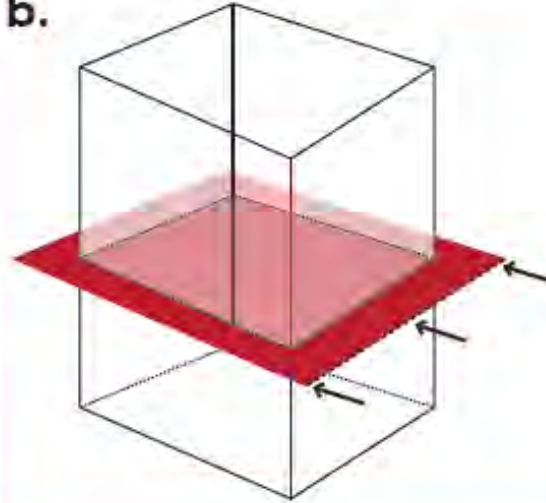
Activity 1
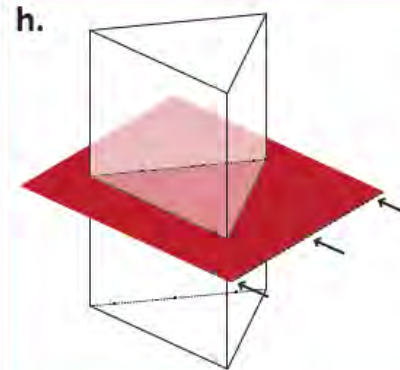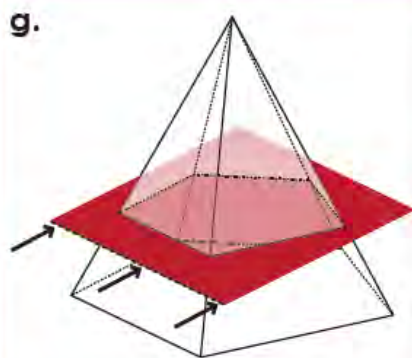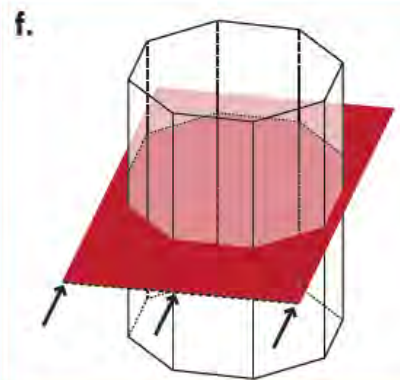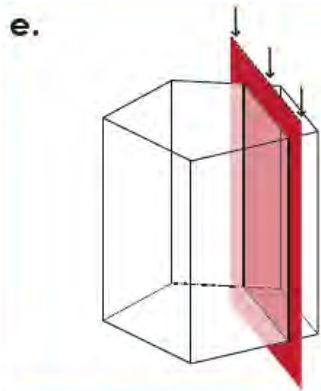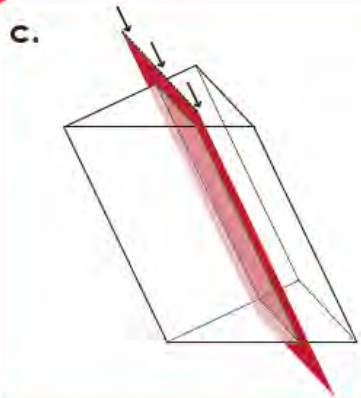
Activity 2

Let's try creating some cross-sections.

1. You will need: plasticine and a knife or very thin string such as fishing line.

- Using some plasticine, make **two** rectangular prisms.
- Use the knife or fishing line to carefully cut **one prism** into two pieces. Make sure your cut is parallel to the base.

Answer these questions based on the image above:

a. Is the face of the cross-section the same shape or a different shape to the base? _____

b. If you made another cut parallel to the base, would the cross-section be the same shape or a different shape? Why?

_____

_____

_____

Activity 2

2. Now cut the **second prism** into two pieces so that the cut face is a different size and shape to the base of the prism.

How did you cut the prism? Describe your cut and draw a diagram. **Hint:** was the cut parallel to the base?

_____

_____

This cut is called a **section**. It is not the same size and shape as the base.

Let's look at the cross-sections of rectangular prisms and cubes.

The face of a cross-section can change depending on where you cut a prism.

These are uniform cross-sections. They are the same size and shape as the base.
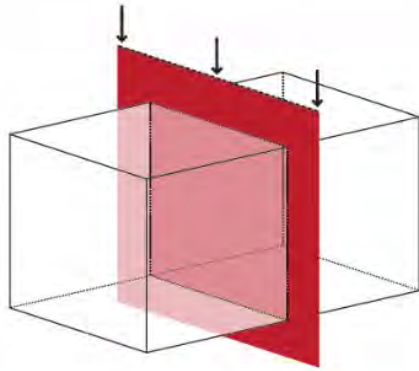
The cross-section of this prism will be square.
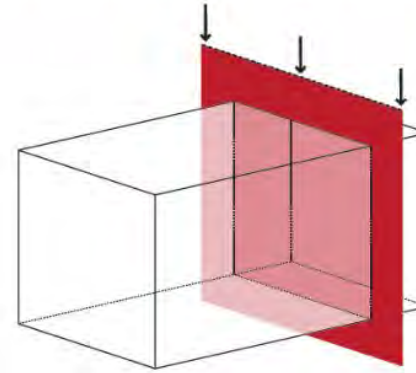
The cross-section of this prism will be square.

A cut parallel to the base of a prism will make a uniform cross-section.

These slices of toast are uniform cross-sections cut from a loaf of bread.

Notice how the face of each slice of cheese is the same shape and size. These are also uniform cross-sections.

The orange cut faces of this square prism are **not the same** size and shape as the base. They are '**sections**'.

3. The diagram of the cube below shows three cuts of a cube. The shapes beside the cube show a cross-section and two sections formed by the cuts. Write the letter of the cut next to the matching cross-section or section.

Reminder: A section is the face created by a cut that is **not** the same size and shape as the base.
In the diagram below, **X** and **Z** are sections.
Y is a cross-section.

a. _____

b. _____

c. _____

Tuesday

Ignition Activity – choose your level

Answers for today will be posted at the end of the week

Fractions and Decimals Glossary

Glossary

- **denominator:** the bottom number in a fraction which shows the number of parts a shape, object, or collection has been divided into

- **fraction:** a part of a whole or group, represented with a numerator (top number) and denominator (bottom number)

- **improper fraction:** a fraction which is greater than one whole, the numerator is greater than the denominator

- **mixed numeral:** a number written as a whole number and a fraction

- **numerator:** the top number in a fraction which shows the number of parts of the whole

- **unit fraction:** a fraction where the numerator is the number 1. This is one part of the whole.

Adding Fractions

Gina and Theresa went to the buffet at Pizza Luna, which charges for pizza by the slice. Gina ate 3–6 of a margarita pizza and 2–6 of a hawaiian pizza.

What mathematical operation does Gina need to use to work out how many slices of pizza she has eaten?

Gina needs to use addition to find the total number of pizza slices that she has eaten. So how do you add fractions together?

The fractions that Gina adds have the same denominator which makes it a simple calculation.

When adding fractions with the same denominator you **only add the numerators together** and **keep the denominators the same**.

Let's look at how to add the fractions of pizza that Gina ate.
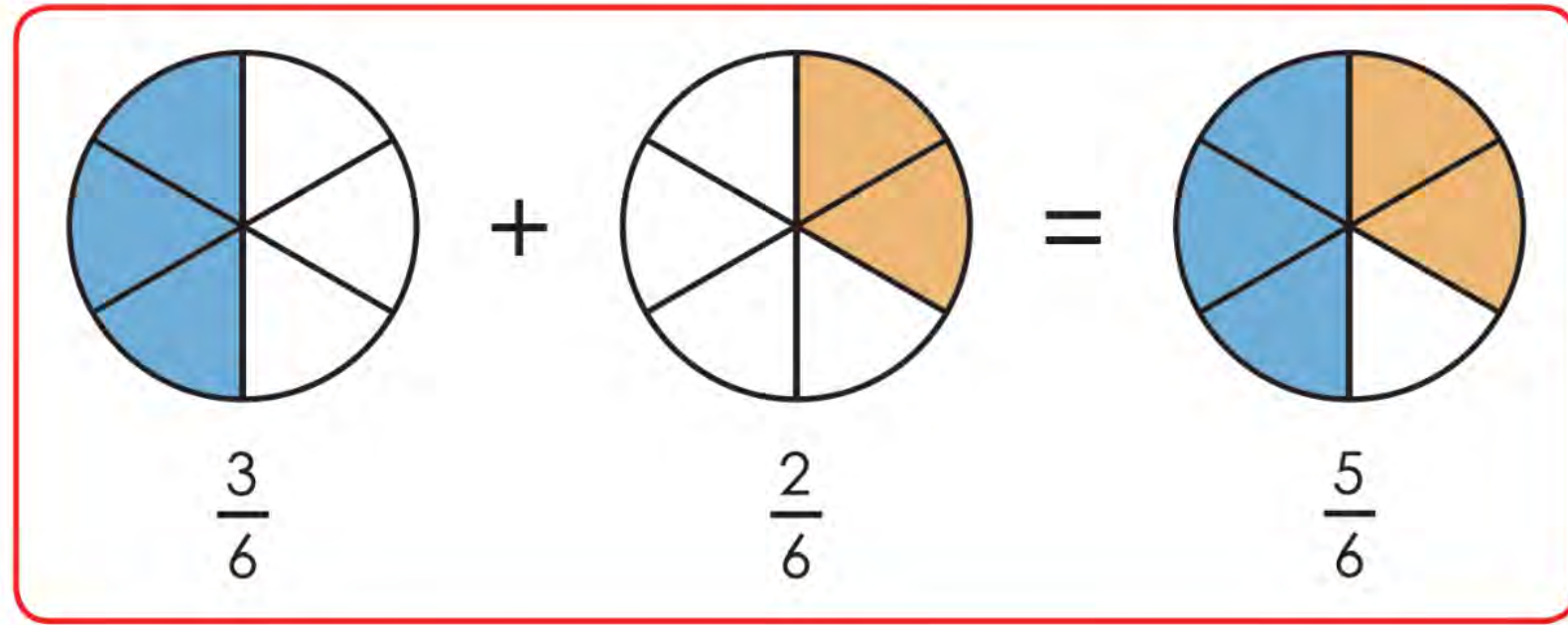
$$\frac{3}{6} \quad + \quad \frac{2}{6} \quad = \quad \frac{5}{6}$$

The number sentence $\frac{3}{6} + \frac{2}{6} = \frac{5}{6}$ can also be shown on a fraction number line.
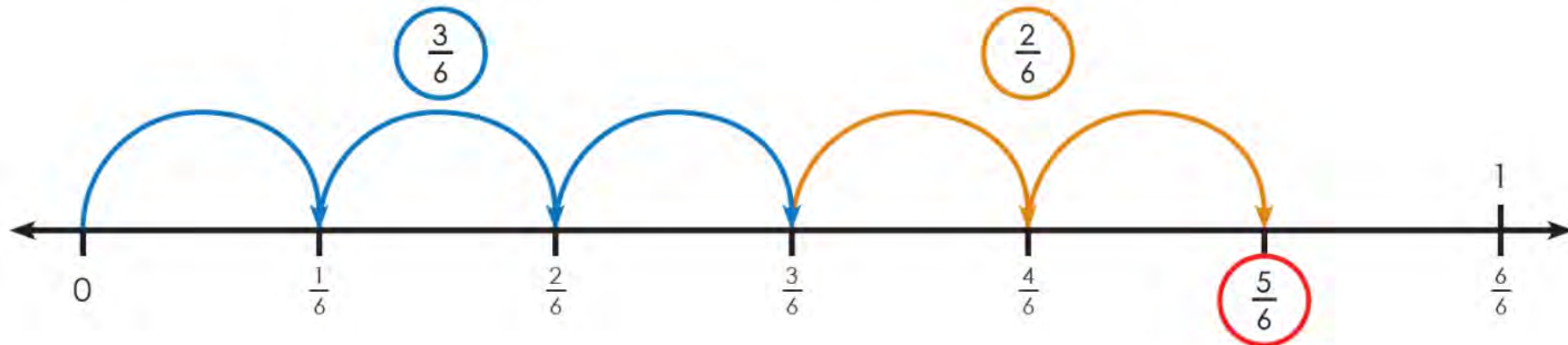
Why don't you add the denominators in a fraction number sentence?

The denominator is the number of parts the whole is divided into, so if they are added together, smaller equal parts are made.

Let's look at this explained for the previous number sentence $\frac{3}{6} + \frac{2}{6} = \frac{5}{6}$ in the diagram. The numerators 3 and 2 were added together to make 5 equal parts out of 6.

If the two denominators were added together, there would be 12 equal parts in the circle. The circles below show that 5 equal parts of 12 is not the same amount as 5 equal parts of 6, in fact it's less than what we had when we started!

6 equal parts
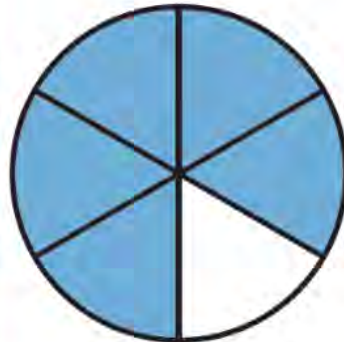
$\frac{5}{6}$

12 equal parts

$\frac{5}{12}$

When you are adding fractions you will often find that the answer is a **mixed numeral** or **improper fraction**.

For example, Theresa ate $\frac{2}{6}$ of the meat lovers pizza, $\frac{1}{6}$ of the margarita pizza, and $\frac{4}{6}$ of the pepperoni pizza. How would she add these amounts together? Look at the diagram below.
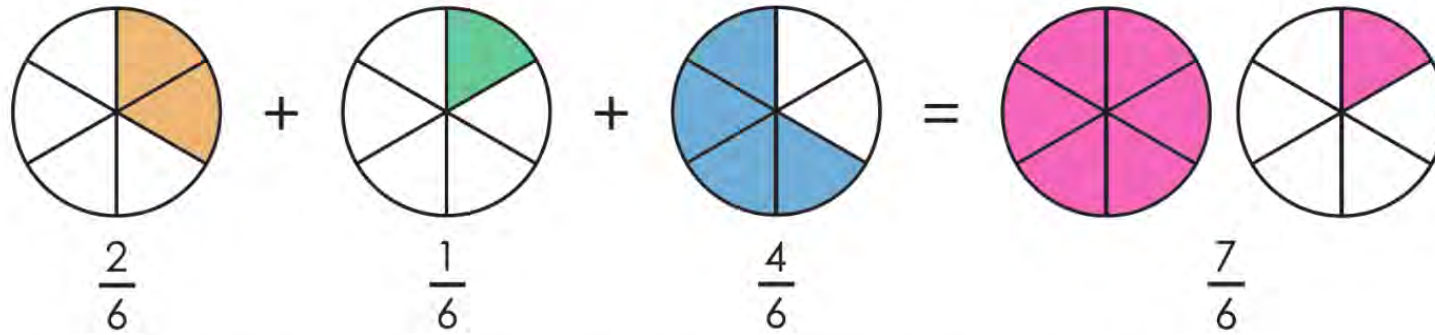
$$\frac{2}{6} \quad + \quad \frac{1}{6} \quad + \quad \frac{4}{6} \quad = \quad \frac{7}{6}$$

The answer to the fraction number sentence $\frac{2}{6} + \frac{1}{6} + \frac{4}{6}$ is $\frac{7}{6}$. This is called an improper fraction.

The answer to the fraction operation $\frac{2}{6} + \frac{1}{6} + \frac{4}{6}$ can also be written as a mixed numeral.

Mixed Numeral

A number written as a whole number and a fraction, for example, $1\frac{1}{6}$.

Look at the number sentence $\frac{2}{6} + \frac{1}{6} + \frac{4}{6} = \frac{7}{6}$ on the number line below, which has improper fractions and mixed numerals marked on it.

Improper fraction
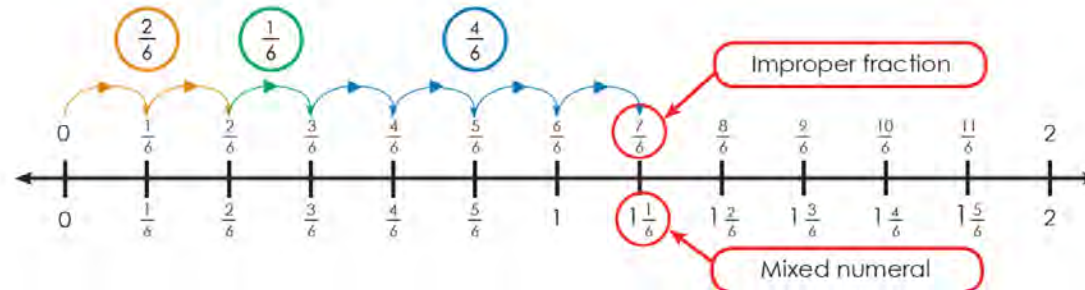
Mixed numeral

Using the number line above, you can see that the improper fraction $\frac{7}{6}$ is the same as the mixed numeral $1\frac{1}{6}$. When you are adding fractions it can be easier to convert improper fractions to mixed numerals.

Let's look at fractions being added together to make a mixed numeral.

$$\frac{4}{5} + \frac{3}{5} = \frac{7}{5} = 1\frac{2}{5}$$
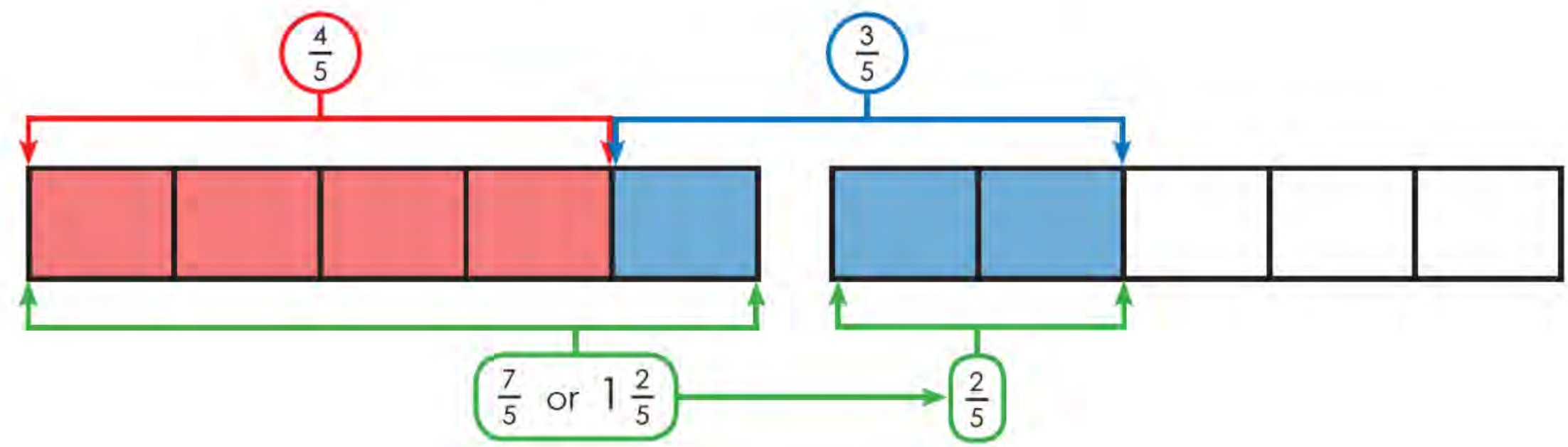
Activity 1

1. Add the fractions below. Remember that the denominator stays the same, just add the numerators. Use the number lines or shapes to help you and don't forget to shade them in where necessary.

a. $\frac{4}{6} + \frac{1}{6} =$ _____
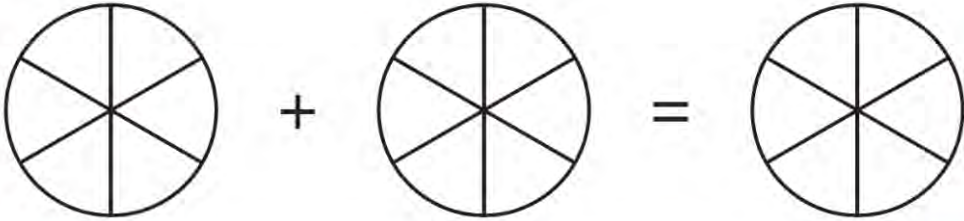
b. $\frac{2}{8} + \frac{5}{8} =$ _____
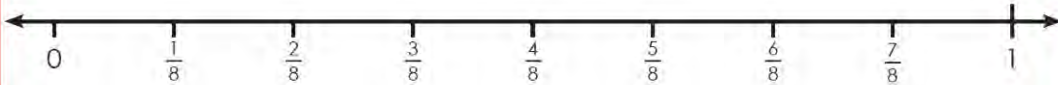
c. $\frac{1}{5} + \frac{3}{5} =$ _____

d. $\frac{5}{12} + \frac{6}{12} =$ _____
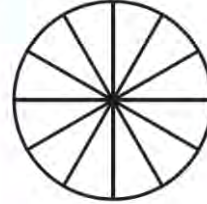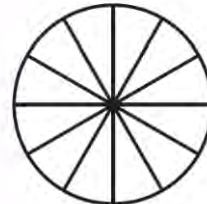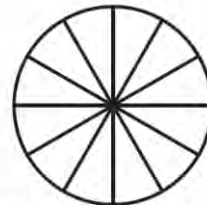
More practice? Try this game.

Can you hit the apple in Fraction Fiddle?

Activity 1

2. Add the fractions below. If the answer is an improper fraction, convert it to a mixed numeral. Use the space provided to help you find the answers.

a. $\frac{2}{5} + \frac{1}{5} =$	**b.** $\frac{8}{12} + \frac{10}{12} =$	**c.** $\frac{4}{8} + \frac{3}{8} =$
d. $\frac{2}{3} + \frac{2}{3} =$	**e.** $\frac{4}{6} + \frac{1}{6} =$	**f.** $\frac{3}{4} + \frac{2}{4} =$

Activity 2

When Gina left Pizza Luna, she took a whole pizza home for her mum. She also took $\frac{2}{6}$ of uneaten pizza from her lunch with Theresa. To work out the total amount of pizza she took home you have to add a whole number and a fraction.

When you add fractions to whole numbers, it is a simple process of combining them. Take a look at the examples below.

Example 1

$$2 + \frac{3}{4} = 2\frac{3}{4}$$

Example 2

$$5 + \frac{7}{8} = 5\frac{7}{8}$$

Whole numbers do not need denominators. Why?

Fractions are equal parts of a whole. Whole numbers represent all the equal parts, not some of them. For example, $1 = \frac{4}{4}$ or $\frac{10}{10}$ etc. That is why we can add them to fractions as they are.

Solve these number problems.

1. $3 + \frac{5}{6} =$	2. $9 + \frac{2}{3} =$	3. $\frac{1}{2} + 2 =$
4. $\frac{6}{10} + 13 =$	5. $4 + \frac{4}{6} =$	6. $15 + \frac{70}{100} =$
7. $\frac{6}{12} + 3 =$	8. $\frac{4}{5} + 8 =$	9. $6 + \frac{4}{10} =$

Subtracting fractions

Have A Go!

The staff at Pizza Luna want to see which pizza flavours are the most popular at the lunch buffet. To do this they compare the number of pizzas eaten. Firstly, they look at how many pieces of mushroom pizza were eaten compared to the meat lovers pizza. There is $\frac{5}{6}$ of the mushroom pizza left and $\frac{2}{6}$ of the meat lovers pizza. To work out how many more pieces there are, you would use subtraction.

Subtracting fractions with the same denominator is similar to adding them. You subtract the numerators and the denominators stay the same. Look at the example below.

$$\frac{5}{6} - \frac{2}{6} = \frac{3}{6}$$
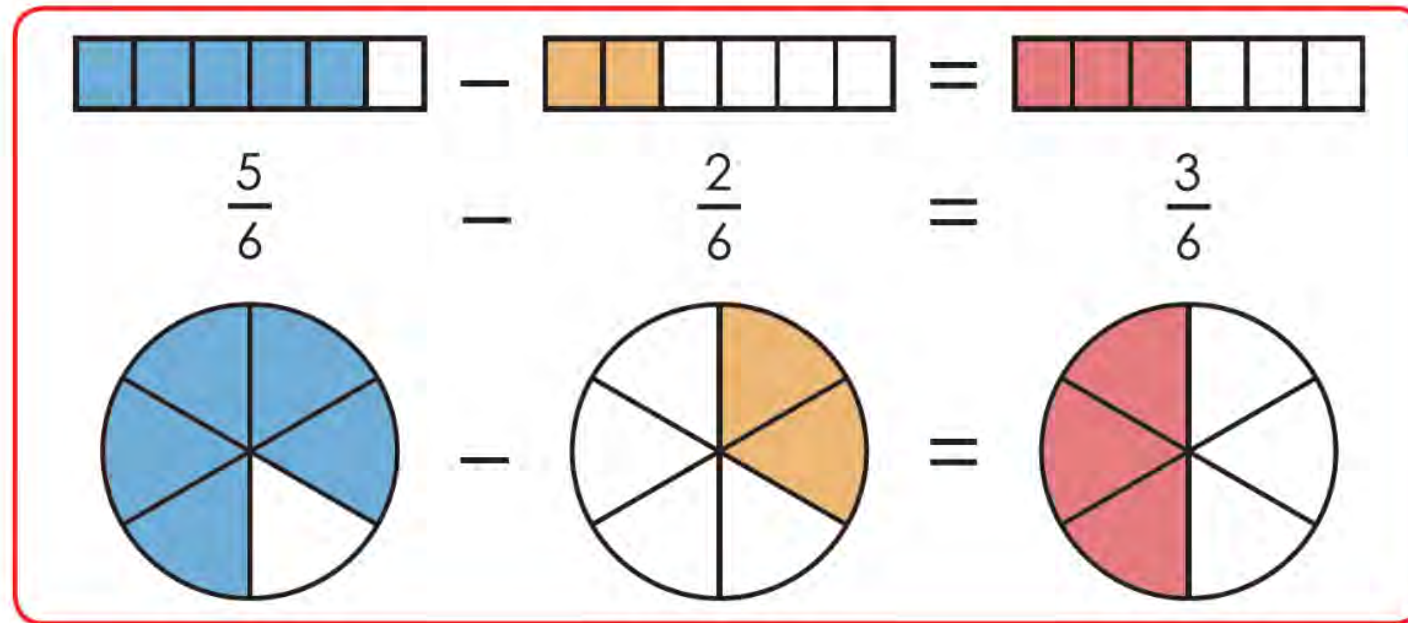
Activity 1

A number line can also be used to work out how many more pieces were eaten.
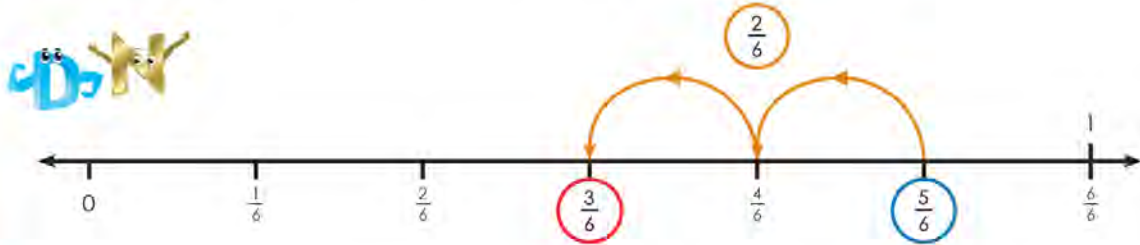
Using the shaded shapes and number line you can see that $\frac{3}{6}$ more meat lovers pizza was eaten compared to the mushroom pizza.

1. Help the staff of Pizza Luna work out the more popular flavours below. Use the space to show your working.

a. Susannah has been asked to look at which vegetarian pizza is the most popular. There is $\frac{4}{6}$ left of vegetarian supreme and $\frac{1}{6}$ left of italiano. How much more vegetarian supreme is left compared to the italiano?

slices left: _____

b. Susannah counts that there is $\frac{2}{6}$ left of the margarita pizza and $\frac{1}{6}$ of the four cheese pizza. How much more margarita pizza is left compared to the four cheese pizza?

slices left: _____

c. Which vegetarian pizza was the most popular, vegetarian supreme, italiano, margarita pizza or four cheese pizza?

most popular pizza: _____

Activity 2

2. Subtract the fractions below. You could use a number line or shaded shapes to help you find the correct answer.

a. $\frac{3}{4} - \frac{1}{4} =$

b. $\frac{5}{6} - \frac{2}{6} =$

c. $\frac{2}{3} - \frac{1}{3} =$

d. $\frac{8}{10} - \frac{4}{10} =$

e. $\frac{5}{8} - \frac{1}{8} =$

f. $\frac{4}{6} - \frac{1}{6} =$

g. $\frac{10}{12} - \frac{3}{12} =$

h. $\frac{70}{100} - \frac{30}{100} =$

Wednesday

Ignition Activity – choose your level

Answers for today will be posted at the end of the week

EASY — ID: 55277 — Next Level — EMOJI PUZZLES FOR DEVELOPING MINDS

😉 + 😉 + 😉 = 27

😎 + 😉 + 😎 = 21

😌 + 😌 + 😎 = 16

😌 × 😎 + 😉 = ?

Solvemoji.com — 1/1 (100%) — Answer…

MEDIUM — ID: 55262 — Next Level — EMOJI PUZZLES FOR DEVELOPING MINDS

🧜 + 🧜 + 🧜 = 24

🧜 + 🧜 × 🧙 = 240

🧙 × 🧙 + 🧞 = 204

🧞 + 🧜 × 🧙 = ?

Solvemoji.com — 1/1 (100%) — Answer…

HARD — ID: 55284 — Next Level — EMOJI PUZZLES FOR DEVELOPING MINDS

⛑️ + 🧦 + ⛑️ = 41

⛑️ + ⛑️ × 👗 = 133

👗 + 👗 + 🧦 = 56

🧦 + 👗 × ⛑️ = ?

Solvemoji.com — 0/0 (0%) — Answer…

Cross-sections of Pyramids

Have A Go!

Pyramids are formed by connecting an apex to each corner of a base. The edges from the apex that connect to the base form the faces of a pyramid, and will always be triangular.

Let's revise the parts of a pyramid.

1. Label the following diagram by drawing lines from the words to the correct features of the pyramid.

apex

base

face
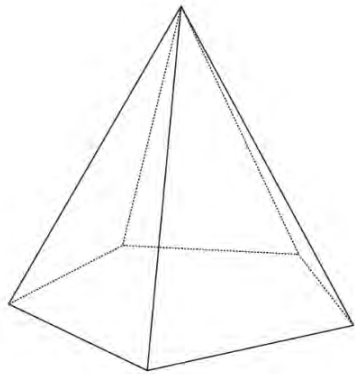
> Look at the faces of the pyramid. What do you notice about the shape of each face?

2. Cross-sections of pyramids differ from prisms. Complete the activity below to find out how.

a. Look at the cut labelled **X** in this rectangular pyramid.

Will the shape of the cross-section be the same shape or a different shape to the base?

| same | different |

Will the cross-section be a larger size or smaller size than the base?

| larger | smaller |

b. Look at the cut labelled **Y** in the same rectangular pyramid.

Will the shape of the cross-section be the same shape or a different shape to the base?

| same | different |

Will the cross-section be a larger size or smaller size than the cross-section in **2a**?

| larger | smaller |
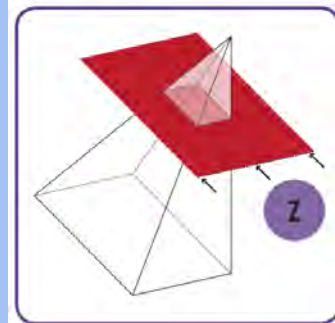
c. Look at the cut labelled **Z** in the same rectangular pyramid.

Will the shape of the cross-section be the same shape or a different shape to the base?

| same | different |

Will the cross-section be a larger size or smaller size than the cross-section in **2b**?

| larger | smaller |

> Notice how the shape of each cross-section of the pyramid becomes smaller the closer the cross-section is to the apex.

Activity 1

3. Look at the names of these pyramids and the shape of their bases. What do you notice? Complete the sentence below.
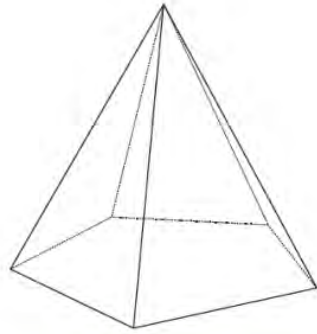
Pentagonal pyramid
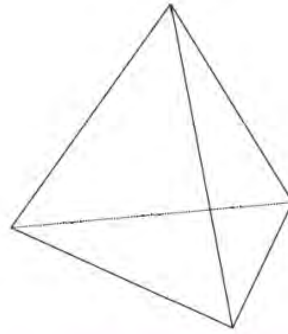
Triangular pyramid
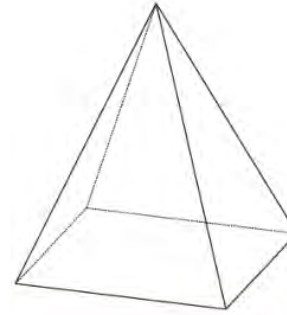
Rectangular pyramid

A pyramid is named according to its _____.

Describing the features of 3D objects

2. Label a vertex, an edge and a face on the prism below.
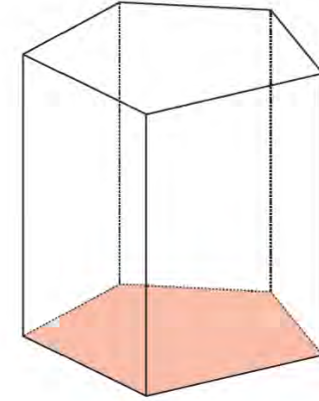
To accurately describe a prism, we need to describe 5 properties.

1. Number of **faces**
2. Shape of **faces**
3. Number and type of identical **faces**
4. Number of **vertices**
5. Number of **edges**

We name a prism by the shape of the base. For example, the prism on the next page has pentagonal bases, so it is a pentagonal prism.

Have A Go!

When describing the properties of prisms there are mathematical terms we can use to communicate more effectively.

First, a quick recap of the basic properties.

1. Draw a line to match each feature to its correct definition.

Edge		Any flat surface of a 3D object.
Vertex		A point where three or more edges of a 3D object meet.
Face		The line formed where two faces meet on a 3D object.

Activity 1

Read the description in the box below. Each number matches one of the five properties in the table on the previous page.

> This is a 3D object.
>
> 1. It has seven faces.
> 2. Two faces are pentagonal, and five faces are rectangular.
> 3. The rectangular faces are the same size.
> 4. The prism has ten vertices.
> 5. It has fifteen edges.
>
> It is a pentagonal prism.

3. Write a description of the objects below for your teacher. Make sure you describe each of the 5 properties. The first one has been done for you.

a.

This object has 6 faces. All the faces are square and all 6 faces are identical. It has 8 vertices and 12 edges. It is a cube.
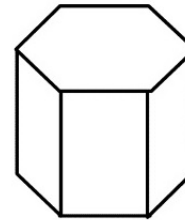
Faces and Bases

1. Looking at the illustrations of prisms throughout this unit you will notice that the **faces** of the prisms (except cubes) are rectangular. If the faces are rectangular, do the bases have to be rectangular too? Why? Write your answer on the lines below:

_____

_____

When comparing 3D objects, we compare the faces, edges, vertices, apex and bases. For example:

A hexagonal prism has more vertices than a triangular prism.

A cube and square pyramid have the same shape as a base.

A cube and a rectangular prism both have 6 faces and 12 edges.

Let's compare some prisms.

2. Here is a triangular prism and a hexagonal prism:

What is similar about their properties? Read each of these statements comparing the two prisms and tick each box if it is a true statement.

Both have two bases that are parallel to each other.	
All faces are rectangular.	
Both have 6 vertices.	
Both have a base.	
The triangular prism has more faces.	

Pyramids have some unique properties and have been used for thousands of years as buildings.

Giza is a city in Egypt. It is famous for its ancient pyramids made out of stone blocks. These are thousands of years old.

This pyramid is at the Louvre in France. The Louvre is a museum housing many famous artworks, including the Mona Lisa.

In these photos, we cannot see the **base** of the pyramids and some of the faces. We can see the **apex** and two **faces**. Faces of prisms and pyramids have a key difference.

Activity 1

If the edges of the faces of a pyramid are meeting at the **apex**, what shape are the **faces?**

1. What is the key difference between the shape of the faces of a pyramid and the shape of the faces of a prism? Write your answer and draw a diagram in the box below.

2. Can the **base** of a pyramid be any shape? Write your answer and draw a diagram in the box below. Note: the base of a pyramid cannot be a circle as a circle does not have straight edges and therefore cannot make a pyramid.

Thursday

Ignition Activity – Revising 3D
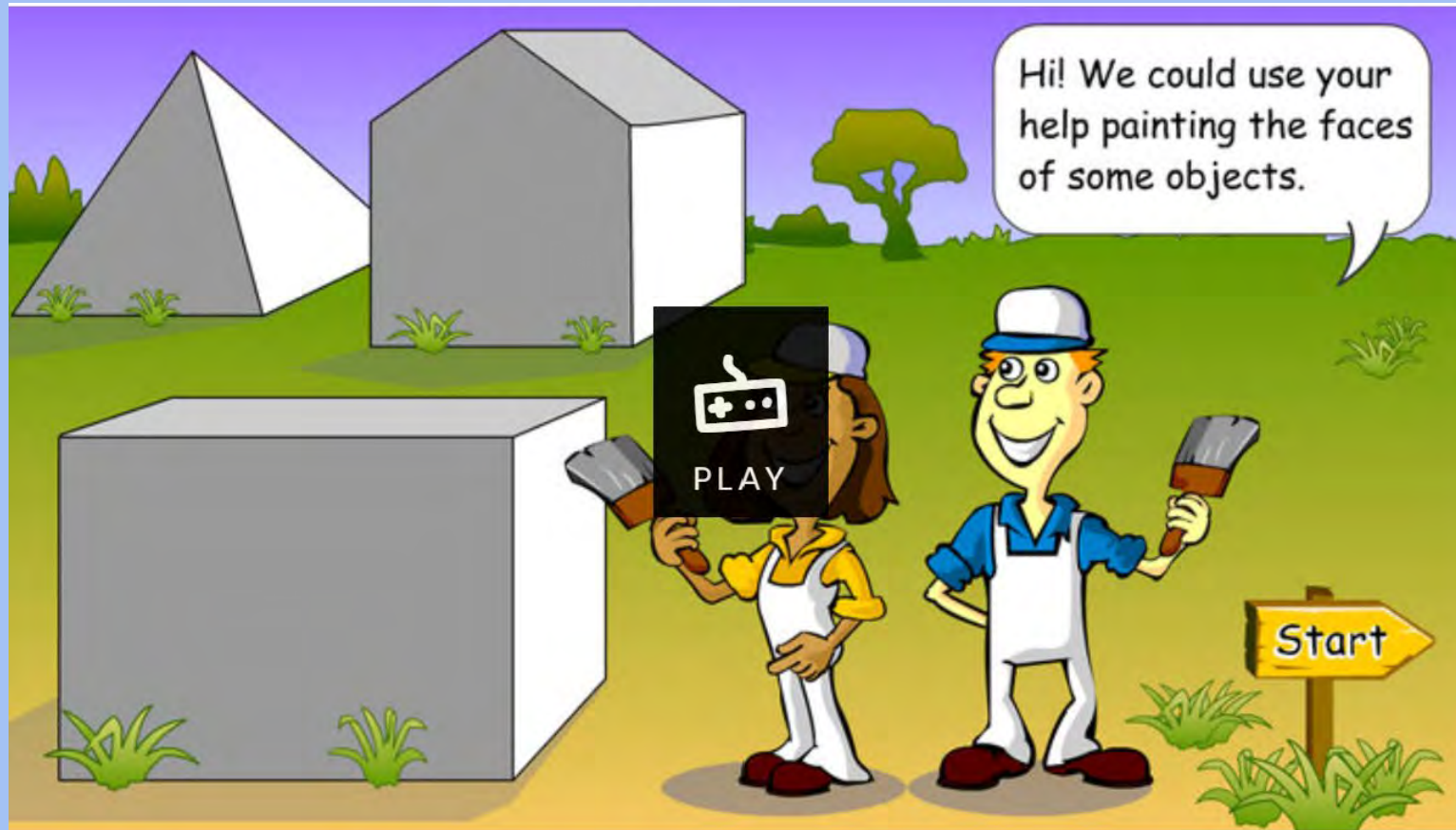
Click on the picture to play the game online.

In this lesson you will be adding mixed numerals with the same denominator.

Have A Go!

Phoebe had her birthday party at 'Cookies and Cakes'. The restaurant counts the slices of cake the guests had. They ate $2\frac{4}{6}$ of the cinnamon cake and $1\frac{1}{6}$ of the raspberry cheesecake. How would you work out the total number of slices they had? Look at the diagram below.

Remember: a mixed numeral is a whole number and a fraction, for example $1\frac{3}{4}$.
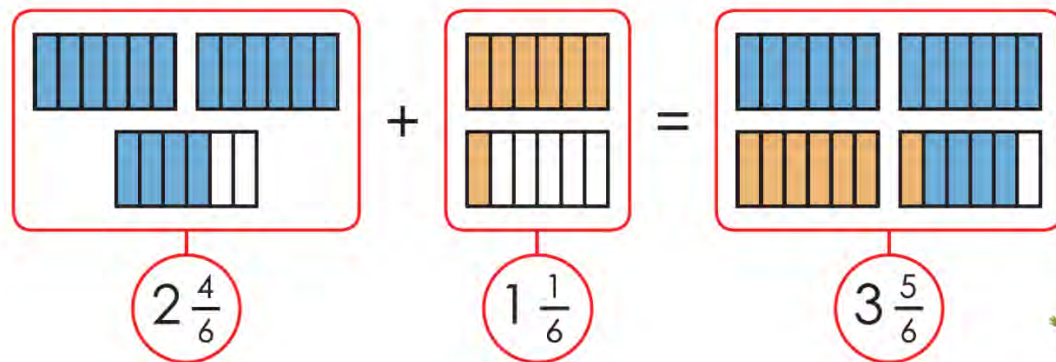
To solve number sentences with mixed numerals, first add together the whole numbers. At Phoebe's birthday party, the number of whole cakes is 2 + 1 = 3. Finally, add the fractions. At the birthday party the fractions are $\frac{4}{6} + \frac{1}{6} = \frac{5}{6}$. You now combine the fraction and whole number to make the final answer $3\frac{5}{6}$.

Let's look at another example.

Henry and Kris went to Pizza Luna to try their new style of pizza called micro pizzas, and they both ordered different flavours. Pizza Luna charges for pizza by the slice and they were charged for 9 micro pizzas. This didn't seem right as they thought they had eaten less. Each micro pizza is divided into 8 slices. Henry ate 3 whole micro pizzas and 3 slices of another. Kris ate 4 whole micro pizzas and 6 slices of another. Did the restaurant make a mistake?

Let's look at another example.

Henry and Kris went to Pizza Luna to try their new style of pizza called micro pizzas, and they both ordered different flavours. Pizza Luna charges for pizza by the slice and they were charged for 9 micro pizzas. This didn't seem right as they thought they had eaten less. Each micro pizza is divided into 8 slices. Henry ate 3 whole micro pizzas and 3 slices of another. Kris ate 4 whole micro pizzas and 6 slices of another. Did the restaurant make a mistake?

Fractions of pizzas

Whole pizzas → $3\frac{3}{8}$ $+$ $4\frac{6}{8}$ $=$ $8\frac{1}{8}$ ← Total pizzas
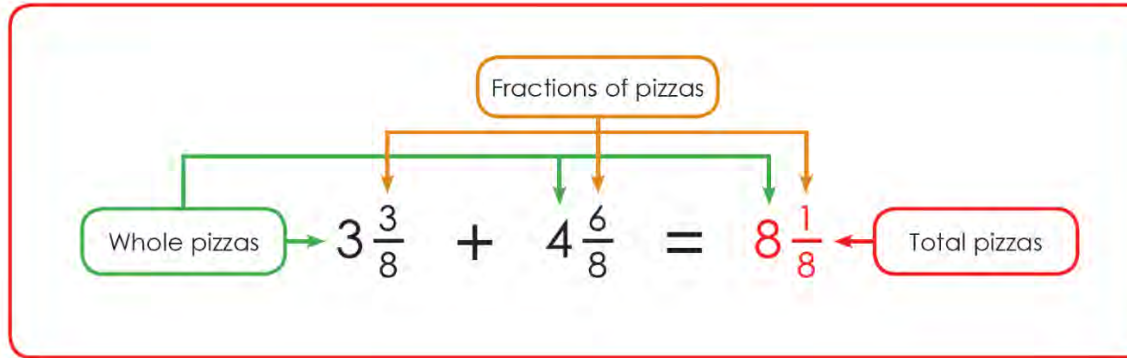
Let's look at this shown in a diagram. **First** you need to add the whole numbers together.

Henry ($3\frac{3}{8}$)

Kris ($4\frac{6}{8}$)

Add the whole numbers together. In this example, the whole numbers are whole pizzas. $3 + 4 = 7$
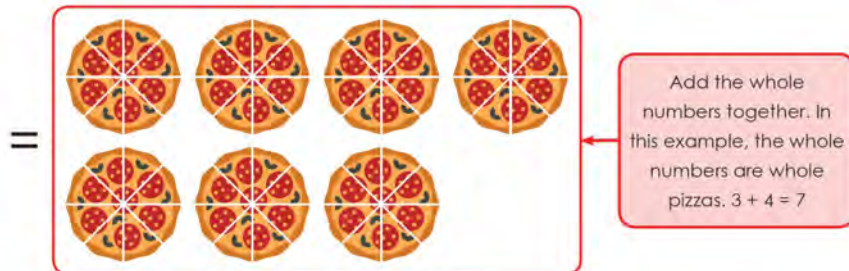
Next, add the fractions and turn the improper fraction into a mixed numeral.

Add the fractions. The fractions are the leftover slices.
$\frac{3}{8} + \frac{6}{8} = \frac{9}{8} = 1\frac{1}{8}$

$=$ $1\frac{1}{8}$

Finally, add the whole numbers and mixed numeral together. You now have the final answer!

Add the 2 answers together.
$7 + 1\frac{1}{8} = 8\frac{1}{8}$
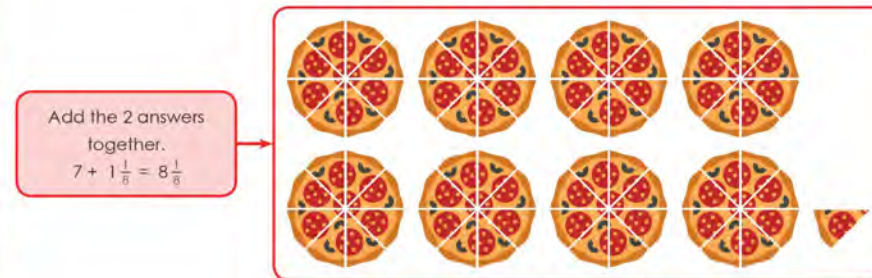
Activity 1

1. Add the mixed numerals below. You could use a number line or shaded shapes to help you find the correct answer.

a. $4\frac{1}{8} + 2\frac{3}{8} =$

b. $6\frac{3}{6} + 2\frac{2}{6} =$

c. $4\frac{2}{3} + 5\frac{2}{3} =$

d. $8\frac{3}{12} + 1\frac{5}{12} =$

e. $3\frac{2}{4} + 2\frac{1}{4} =$

f. $7\frac{8}{10} + 1\frac{1}{10} =$

Activity 2

2. Solve the following word problems. Use the space to show your working.

a. At a swimming carnival, the four members of the 50 m freestyle relay team from Northlakes Primary School came in first place. Nathan swam his leg of the race in $35 \frac{2}{10}$ seconds. Shannon swam her leg in $34 \frac{6}{10}$ seconds. What is the time of these two freestyle legs combined?

Tip: $\frac{2}{10}$ of a second would be equal to 20 milliseconds and would be displayed as a time like this, **35.20**.

time:_____

b. Hannah swam her leg of the 50 m freestyle relay in $35 \frac{8}{10}$ seconds and Sonny swam his leg in $36 \frac{1}{10}$ seconds. What is the time of the these two freestyle legs combined?

time:_____

c. Add the times of each member of the 50 m freestyle relay team. How long did the whole team take?

time:_____

In this lesson you will be learning how to subtract a unit fraction from a whole number.

Have A Go!

Aaron is at a chocolate-making course with his friend Will. The first chocolate bar that he makes is milk chocolate with honeycomb and popping candy. The chocolate bar is divided into three pieces and he offers one piece for Will to try.

Look at the number sentence below, which shows a whole number minus a fraction.

$$1 - \frac{1}{3} = \frac{2}{3}$$

The fraction $\frac{1}{3}$ has a special name. It is called a **unit fraction**. Look at the definition below.

Unit Fraction

One equal part of the whole; a fraction with a numerator of 1.

$\frac{1}{3}$ is a unit fraction because it is one part of a whole and has the numerator 1.

When subtracting fractions from whole numbers, the answer will always be a fraction. Look at the example below to see how a unit fraction is subtracted from a whole number.

$$1 - \frac{1}{3} = \frac{2}{3}$$
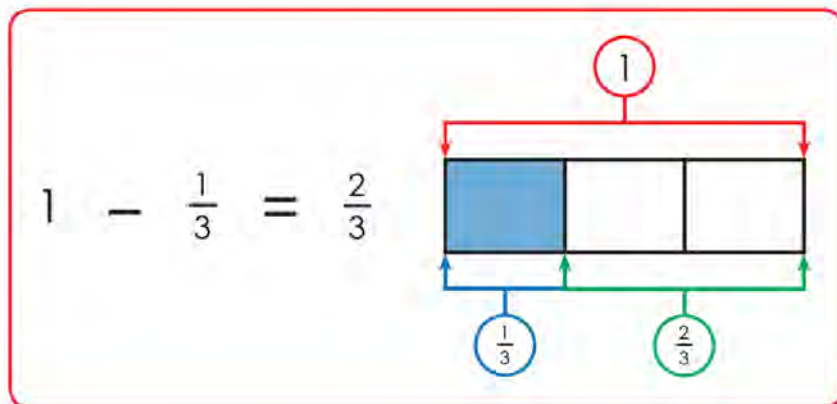
When you are taking a fraction away from a whole, the answer will be a fraction as it is less than a whole. Let's look at this another way using a diagram.

$$1 - \frac{1}{3} = \frac{2}{3}$$

You can also solve this problem mentally. Look at the numbered steps below.

1. This tells you that the whole is going to be divided into 3 parts.

3. You can now mentally solve the number sentence.

$$\frac{3}{3} - \frac{1}{3} = \frac{2}{3}$$

2. The whole can be written as $\frac{3}{3}$.

$$1 - \frac{1}{3} = \frac{2}{3}$$

If the whole number is larger than 1, subtract the fraction in the same way. Look at the example below.

$$5 - \frac{1}{6} = 4\frac{5}{6}$$
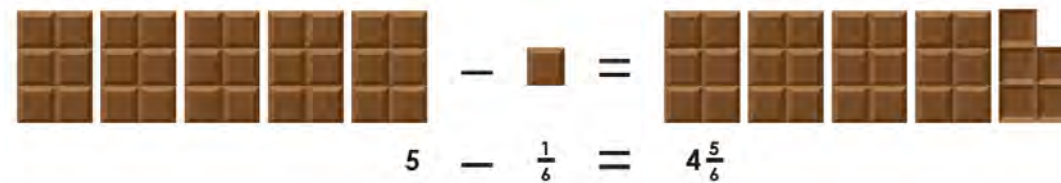
Activity 1

1. Subtract the unit fractions from the whole numbers. Use the space to show how you found your answers. You can complete the number sentences, draw diagrams or solve them mentally.

a. $1 - \frac{1}{4} =$

b. $3 - \frac{1}{3} =$

c. $6 - \frac{1}{10} =$

d. $8 - \frac{1}{8} =$

e. $13 - \frac{1}{12} =$

f. $9 - \frac{1}{6} =$

Activity 2

2. Solve the following word problems. Use the space to show your working.

a. Aaron and Will went to a chocolate-making class. Will makes dark chocolate bars with orange and jelly beans. He makes 3 bars and gives Aaron $\frac{1}{5}$ of a bar to try. How much is left?

amount of chocolate left: _____

b. At the end of the class Aaron makes a giant chocolate bar with all the left-over chocolate. Aaron tries $\frac{1}{100}$ of it. How much is left after Aaron tries the chocolate?

amount of chocolate left: _____

Friday

Ignition Activity – choose your level

Answers for today will be posted at the end of the week

Ordering Fractions
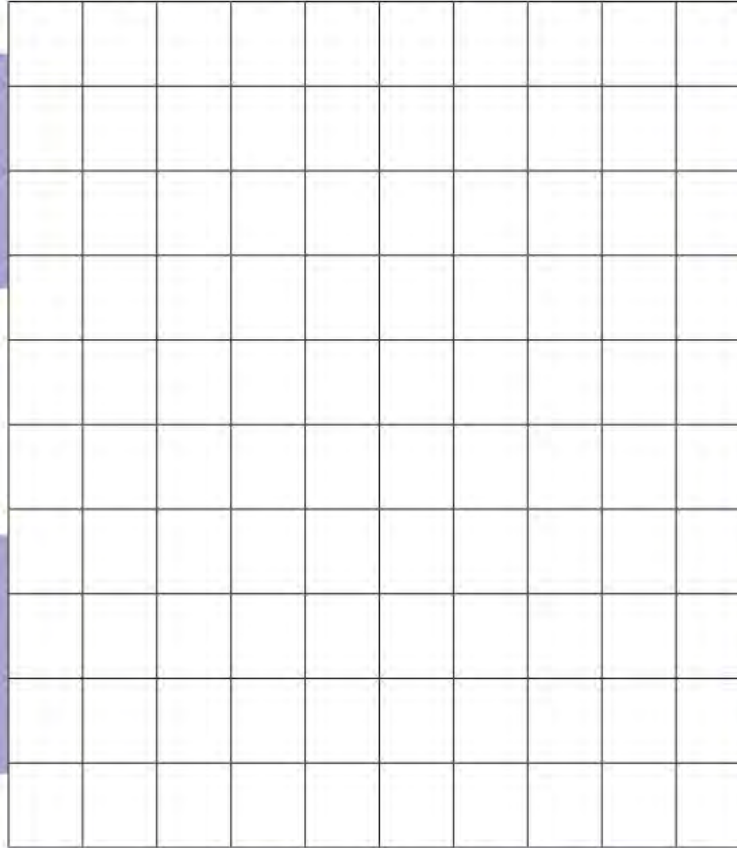
Add Fractions

Multiply Fractions

Activity 1

Fraction Art

Colour in the squares in the 100 chart to create a piece of art. Record the fraction, decimal and percentage amount of the colours you used.

Colour	Fraction	Decimal	Percentage

Challenge-Bryony's Triangle

Watch the video BryonyTriangle.mp4 in which Bryony demonstrates how to make a flower from a square of paper.

She then sets you a challenge: what fraction of the original square of paper is the shaded triangle?

Hints;

How might you use the folds of your flower to help?

What fractions of the piece of paper can you see using the folds?

How could you split the paper in half using the fold lines? A quarter …?

Optional Weekly Challenge
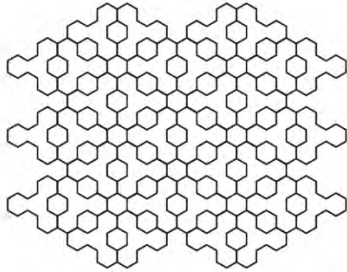
SHIFTING shapes

Mathematics Investigation
two-dimensional space, three-dimensional space

You will need:
Pencil and paper

☐ 1. Locate two areas in your home that present with tessellating 2D shapes.
☐ 2. Fill an A4 piece of paper with a drawing of the tessellating shapes.
☐ 3. Research M. C. Escher.
☐ 4. Study Escher's work on birds, butterflies and lizards
☐ 5. Choose an irregular 2D shape and show how it can be tessellated.
☐ 6. Present your irregular 2D shape tessellation as an artwork. Are there any lines of symmetry?

☐ **Extension:**
Create and build one of Escher's optical illusions as a 3D model.

Want more Maths?

You can also go onto Mangahigh or Studyladder

Ask your teacher if you need your login details.

A Week of STEM

- Each day you will be asked to complete a new STEM challenge.
- Please complete the questions and share a picture of your project each day in the space provided.
- If you do not like the daily challenge, or do not have the required materials, you can choose one from another day, or from the grid on the final slide.

HAVE FUN!

STEM CHALLENGE 1: *Create an apple boat*

What is a boat? Write a definition.

Take an apple and a bowl of water. Do you think the apple will float or sink? Why or Why Not?

Does an apple float?

Can you build a boat made out of one apple?
What problems might you have in completing this challenge? Eg: do you have all the equipment? What could you use instead?

Brainstorm 3 ways you could complete this challenge:

Research and Plan here: What do you need to know about boats and what do you need to think about before starting?

What You Need:
- An apple
- Bowl of water
- Toothpicks
- Plastic knife
- A lego man or small figurine

My STEM Process:

Develop and Make: come up with a apple structure that will not only float in the water, but one that you can place a lego person on top of and it will not fall off. The structure has to be stable.

Was your project successful? Why? Why Not?

What would you do differently next time?

What did you learn before, during and after this challenge?

What skills do you have that you used in this challenge?

Photo of my Project

STEM CHALLENGE 2: *Spaghetti Tower*

What is a tower? Write a definition.

What features do all tall towers have in common?

Can you build a tall tower made out of spaghetti?
What problems might you have in completing this challenge? Eg: the spaghetti might break easily? How could you overcome this?

Brainstorm 3 ways you could complete this challenge:

What You Need:
- Spaghetti
- A long piece of thread or thin string
- tape
- A lego man or small figurine

Research and Plan here: What do you need to know about towers and what do you need to think about before starting?

My STEM Process:

Develop and Make: The goal is to see how tall you can build a Spaghetti tower using only spaghetti, tape, and thread. But, there is a twist. This tower also has to support the weight of a LEGO minifigure!

Was your project successful? Why? Why Not?

What would you do differently next time?

What did you learn before, during and after this challenge?

What skills do you have that you used in this challenge?

Photo of my Project

STEM CHALLENGE 3: *Build a Bridge*

What is a bridge? Write a definition.

What features do bridges need in order to support weight?

Can you build a bridge that will support a single can of food?
What problems might you have in completing this challenge? Eg: different materials around the house might work better than others.

Brainstorm 3 ways you could complete this challenge:

What You Need:

- A can of food
- Any materials you like: lego blocks, cardboard, duplo, wooden blocks etc.

Research and Plan here: What do you need to know about bridges and what do you need to think about before starting?

My STEM Process:

Develop and Make: Can you create a stable bridge that includes an innovative design? This tower also has to support the weight of a can of food.

Was your project successful? Why? Why Not?

What would you do differently next time?

What did you learn before, during and after this challenge?

What skills do you have that you used in this challenge?

Photo of my Project

STEM CHALLENGE 4: *Egg Drop Challenge*

What is an egg? Write a definition.

What about an egg makes it so fragile?

Can you construct a container that will support a egg when dropped from a height?
What problems might you have in completing this challenge? Eg: do you have the materials you need to fully protect your egg?

Brainstorm 3 ways you could complete this challenge:

Research and Plan here: What do you need to know about eggs and what do you need to think about before starting?

What You Need:
- eggs
- various containers and padding: You can use bubble wrap, cotton balls,tissues, plastic food containers, string, tape, plastic bags, cardboard, straws, tape

My STEM Process:

Develop and Make: Can you create a container that will support an egg when dropped from a height of at least 2 metres high? Your container cannot be wider or higher than 10cm.

Was your project successful? (did the egg break?)
Why? Why Not?

What would you do differently next time?

What did you learn before, during and after this challenge?

What skills do you have that you used in this challenge?

Share a Photo or Video of my Project

STEM CHALLENGE 5: Free Choice!

Choose the task that interests you most and share your results on the next slide.

Stage 2

Create Monday	Science Tuesday	Active Wednesday	Engineering Thursday	Fun Friday
Create your personal mission patch! In a large circle, draw (or use clippings) to represent things you are passionate about.	Scientist want to understand the world around us. Write 5 WHY or WHAT questions to learn more about something in nature.	Create an obstacle course. Get a family member to try! What is the shortest amount of time it takes to get through the course?	Engineers solve problems to improve our lives. Brainstorm an invention that can improve your life. Draw how it will work.	Make leaf art! Place a leaf under a sheet of paper and rub a crayon over the leaf to reveal its print.
Create a skit or poster on the importance of hand washing and how to do it properly.	Which is the best invisible ink? Write 3 messages using milk, lemon juice, and vinegar. Allow to dry. Heat up the paper with a blow dryer to see message appear.	Play some basketball (or trash can ball)! Measure how many baskets you make out of 10.	Design and build a table using only newspaper or paper and tape. How much weight can it hold? How can you make it stronger?	Host a paper airplane contest.
With the help of an adult, cook lunch or dinner. Measure out the ingredients. How would you double or halve the recipe?	Place a small ball on top of a large ball and drop them together. Watch how energy is transferred!	Find a quiet place in nature. Bring a journal and record everything you see.	Design and build a catapult with household item to knock over a tower of cups.	Use a small bag of candies like M&Ms, find the ratio of each colour to the total candies in the bag.
Make a greeting card using 3D pop up art.	Find a leaf on a plant, wrap it in a plastic bag and secure it with a rubber band. After a few hours water will appear! This is the plants version of sweating.	Go outside and record as many different insects and mammals as possible.	Design and build a roller coaster from paper, paper plates, and tape. How long can you keep a ping pong ball moving?	Draw or write a story about your ideal vacation.
Create a hoop glider using a straw and paper. How far can you make it go?	Take a pencil and scribble in a square to create a graphite "ink pad". Press your finger in the graphite and then on a sheet of paper to look at your fingerprint!	Measure your heart beat for 10 seconds. Do jumping jacks and then measure again. What is the difference?	Create a zip line for a small action figure to travel down from at least your shoulder height.	Survey your family for these genetic traits: dimples, attached earlobes, ability to roll tongue, and right thumb goes on top when clasping hands.
Draw a robot invention. What would it do?	Go outside and write down your weather observations. What do the clouds look like? Can you tell what direction they are moving?	Create your own dance workout routine. Teach to a family member.	Imagine you only have one leg. Design a prosthetic leg using household items. Test it out! How do you make it comfortable? How would it attach to your body?	With a family member, discuss a significant historical event that happened to them. How did this event impact their life? What did they learn?

Stage 3

Create Monday	Science Tuesday	Active Wednesday	Engineering Thursday	Fun Friday
Create your personal mission patch! In a large circle, draw (or use clippings) to represent things you are passionate about.	Scientist want to understand the world around us. Write 5 WHY or WHAT questions to learn more about something in nature.	Create an obstacle course. Calculate your average time to complete the course over a series of 5 attempts. Get a family member to try!	Engineers solve problems to improve our lives. Brainstorm an invention that can improve your life. Draw how it will work.	Draw your ideal future city. What areas will keep citizens healthy and happy? What laws will you have?
Create a skit or poster on the importance of hand washing and how to do it properly.	Which is the best invisible ink? Write 3 messages using milk, lemon juice, and vinegar. Allow to dry. Heat up the paper with a blow dryer to see message appear.	Play some basketball (or trash can ball)! Measure how many baskets you make out of 10. Calculate your percentage accuracy.	Design and build a table using only newspaper or paper and tape. How much weight can it hold? How can you make it stronger?	Host a paper airplane contest.
With the help of an adult, cook lunch or dinner. Measure out the ingredients. How would you double or halve the recipe?	Place a small ball on top of a large ball and drop them together. Watch how energy is transferred!	Players must keep two balloons up in the air with just one hand and the other hand is kept behind their backs. The last player with two balloons still going wins.	Design and build a catapult with household item to knock over a tower of cups. Calculate percentage accuracy.	Use a small bag of candies like M&Ms, find the ratio of each colour to the total candies in the bag.
Make a greeting card using 3D pop up art.	List 5 non-reusable items in your house. How can you make at least one of them reusable?	Go outside and record as many 10 different insects and mammals.	Design and build a roller coaster from paper, paper plates, and tape. How long can you keep a ping pong ball moving?	Draw or write a story about your ideal vacation.
Create a hoop glider using a straw and paper. How far can you make it go?	Find a quiet place in nature. Bring a journal and record everything you see.	Measure your heart beat for 10 seconds. Convert to beats per minute. Run around and then measure again. What is the percentage increase?	Create a zip line for a small action figure to travel down from at least your shoulder height. Calculate the speed (distance divided by time) of the zip line.	Survey your family for these genetic traits: dimples, attached earlobes, ability to roll tongue, and right thumb goes on top when clasping hands.
Peter Piper picked a peck of pickled peppers. Write 2 of your own tongue twisters.	The tongue map theory states that different areas of your tongue sense different tastes. Look-up this theory. Create an experiment to prove or disprove it.	Create your own dance workout routine. Teach to a family member.	Imagine you only have one leg. Design a prosthetic leg using household items. Test it out! How do you make it comfortable? How would it attach to your body?	Design a device to keep a water balloon or egg from breaking when thrown against a wall or dropped from a second story.

What Do You Need? Make a list here:

Show a picture or video of your challenge and explain the process of completing it:

What did you learnt from completing this challenge?

_____
_____
_____
_____

What would you do differently next time and why?

_____
_____
_____
_____

STEM Reflections

What was your favourite STEM challenge? Why?

What challenge were you most successful at? Why do you think this?

Which task did you find the most challenging? Why?

Write about ONE thing that you have learnt this week. It may be something you found out in research or something you learnt about yourself while completing these challenges.

Monday's Ignition Activity

⭐

⭐ ⭐

⭐ ⭐ ⭐

SOLUTION ID: 55246

ID: 55246   EASY   Next Level

EMOJI PUZZLES FOR DEVELOPING MINDS

$4 + 4 + 4 = 12$

$11 + 4 + 4 = 19$

$11 + 11 + 8 = 30$

$16 + 11 \times 8 = 104$

Solvemoji.com

0/1 (0%)

SOLUTION ID: 55255

ID: 55255   MEDIUM   Next Level

EMOJI PUZZLES FOR DEVELOPING MINDS

$16 + 16 + 16 = 48$

$6 \times 8 + 8 = 56$

$10 + 10 \times 12 = 130$

$8 + 12 \times 5 = 68$

Solvemoji.com

1/1 (100%)

SOLUTION ID: 55256

ID: 55256   HARD   Next Level

EMOJI PUZZLES FOR DEVELOPING MINDS

$6 + 20 \times 6 = 126$

$18 + 12 \times 18 = 234$

$18 + 18 + 10 = 46$

$10 \times 6 \times 9 = 540$

Solvemoji.com

1/2 (50%)

Tuesday's Ignition Activity

⭐

⭐⭐

⭐⭐⭐

ID: 55254   EASY   Next Level

EMOJI PUZZLES FOR DEVELOPING MINDS

$$3 + 9 = 12$$
$$+ \quad +$$
$$7 + 8 = 15$$
$$= \quad =$$
$$10 \quad 17$$

$$3 + 7 \times 16 = 115$$

Solvemoji.com

1/2 (50%)

ID: 55247   MEDIUM   Next Level

EMOJI PUZZLES FOR DEVELOPING MINDS

$$18 + 8 = 26$$
$$\times \quad +$$
$$20 + 22 = 42$$
$$= \quad =$$
$$360 \quad 30$$

$$16 + 18 + 11 = 45$$

Solvemoji.com

0/0 (0%)

ID: 55249   HARD   Next Level

EMOJI PUZZLES FOR DEVELOPING MINDS

$$4 + 8 + 4 = 16$$
$$20 + 8 \times 4 = 52$$
$$10 + 20 + 16 = 46$$
$$20 \times 16 \times 4 = 1280$$

Solvemoji.com

0/0 (0%)

Wednesday's Ignition Activity

⭐ ⭐⭐ ⭐⭐⭐

SOLUTION ID: 55242

ID: 55242   EASY   Next Level
EMOJI PUZZLES FOR DEVELOPING MINDS

$$11 + 11 + 11 = 33$$
$$3 + 11 + 11 = 25$$
$$2 + 2 + 3 = 7$$
$$4 \times 11 + 6 = 50$$

Solvemoji.com

0/0 (0%)

SOLUTION ID: 55243

ID: 55243   MEDIUM   Next Level
EMOJI PUZZLES FOR DEVELOPING MINDS

$$20 + 20 + 20 = 60$$
$$6 + 6 \times 10 = 66$$
$$4 + 6 \times 4 = 28$$
$$10 + 8 \times 6 = 58$$

Solvemoji.com

0/0 (0%)

SOLUTION ID: 55234

ID: 55234   HARD   Next Level
EMOJI PUZZLES FOR DEVELOPING MINDS

$$18 \times 5 = 90$$
$$\times \qquad \times$$
$$12 + 24 = 36$$
$$= \qquad =$$
$$216 \qquad 120$$

$$5 \times 6 + 24 = 54$$

Solvemoji.com

0/0 (0%)

Ignition Activity – Make 100

Click on the picture to play the game online. Snip your results and paste it on this slide.

Friday's Ignition Activity- Third Dimension

There are at least eight arrangements, including the one which we drew in the question.

Here is Ruth's drawing which shows these arrangements very clearly:
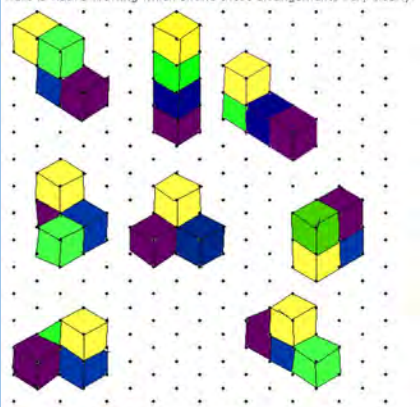
Ciara (from Bristol) explained her strategy:

First I built a tower with multilink where all four blocks were in a row. I called this 'The Tower'. Then I kept three in a row and moved one block into other possible positions. I gave them both names and this helped me with spotting if I'd done any repeats.

When I'd found all of these, I tried versions where there were no more than two blocks in a row. The names were really useful especially with the 'Staircases' as I realised there were two different ways of building the staircase.

In total I found 8 different possibilities for arranging four cubes.
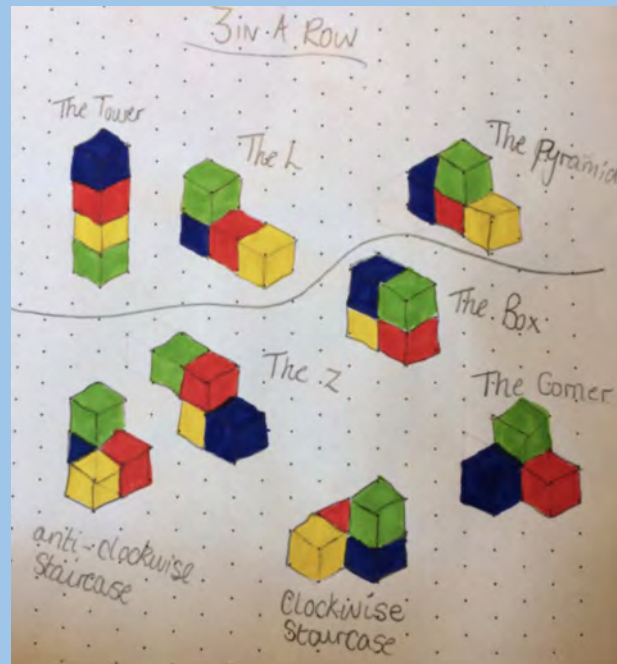
Maths

Week 6 Term 3

...ructions:

...structional videos be...
...d to watch these mor...

...r both activities each day - ac...
...n your slides or on paper or in...
...bles or diagrams that you need...
...ties.

Answers.

Activity 1- F & D

Fractions with the same denominator can be ordered on a number line. The numerator shows the number of parts of the whole. For example, the fraction $\frac{3}{8}$ means 3 parts of the whole. The higher the numerator, the larger the fraction.

The number line below shows fractions in order between 0 and 1. The digit 1 represents a whole number and it also represents the fraction $\frac{4}{4}$ on the number line. When the numerator and denominator of a fraction are the same it means that the fraction can also be represented as a whole number.
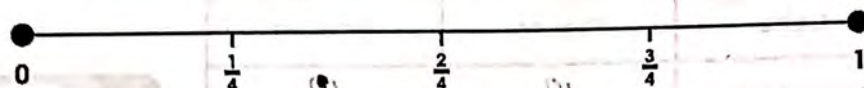
1. Put the fractions from the box onto the number line between 0 and 1.
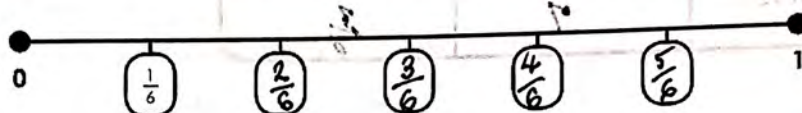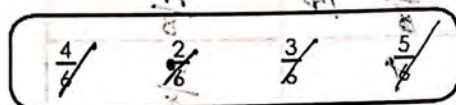
Activity 1

Complete the questions below, using the fraction wall to help you. Explain how you found each answer.

1. $\frac{1}{5}$ and $\frac{1}{3}$ are 1 part of a whole. Which fraction is a larger part of a whole? $\frac{1}{3}$ Reasons may differ.

2. $\frac{1}{8}$ and $\frac{1}{12}$ are 1 part of a whole. Which fraction is a larger part of a whole? $\frac{1}{8}$ Reasons may differ.

3. $\frac{2}{8}$ and $\frac{2}{6}$ are parts of a whole. Which fraction is a larger part of a whole? $\frac{2}{6}$ Reasons may differ.

4. $\frac{6}{10}$ and $\frac{4}{5}$ are parts of a whole. Which fraction is a larger part of a whole? $\frac{4}{5}$ Reasons may differ.

Activity 1

4b) Record which fractions are improper fractions.

$\frac{7}{8}$ $\boxed{\frac{10}{8}}$ $\frac{2}{8}$ $\boxed{\frac{14}{8}}$ $\frac{6}{8}$ $\frac{1}{8}$ $\boxed{\frac{9}{8}}$

5. Imagine that you have been asked to make an order for cakes. Each cake is divided into 8 pieces. Fill in the lists below with proper and improper fractions.

Answers may vary but fractions used must be from the above 4b)

Cake	Pieces	Fraction
coconut cakes	10	$\frac{10}{8}$
caramel cakes	14	$\frac{14}{8}$
cheesecakes	9	$\frac{9}{8}$
black forest cakes	7	$\frac{7}{8}$

Think about the following questions.

- Which of the fractions from the table above are proper fractions and which are improper fractions?
- How do you know which type of fraction they are?

Improper fractions have a numerator greater than the denominator

Activity 2

2. Look at the fractions of collections below. How many groups are circled in each collection? Write the fraction for each one. The first one has been completed for you.

a. $\frac{3}{4}$ $\boxed{\frac{1}{2}}$

b. $\frac{2}{6}$ $\boxed{\frac{3}{5}}$

Activity 2

1. Look at the collection of pears below.

   a. How many pears in the collection?   10
   b. How many pears are circled?   1
   c. What fraction of the collection is this? $\frac{1}{10}$

$\frac{1}{10}$ is a unit fraction. If we want to find $\frac{1}{10}$ of the collection then we need to divide the pears into 10 equal groups.

How many are in each group? 1 pear

$\frac{1}{10}$ of 10 is therefore 1.

If the denominator and the number of objects in the collection are the same number then it is easy to work out the unit fraction of a collection.

Activity 2

What if the denominator is different to the number in the collection?

How would we find $\frac{1}{5}$ of 10 pears?

2. Look at the collection below.

   a. To find $\frac{1}{5}$ of 10 divide the collection into five equal groups then count how many pears are in each group.

   b. How many pears are in each group?

   c. Complete this number sentence.

$\frac{1}{5}$ of 10 = ___2___

Count out 12 items e.g. blocks, buttons etc. How would you find $\frac{1}{3}$ of 12 ?

d. Divide your 12 blocks into three equal groups. Alternatively, circle the blocks above to make three equal groups. How many blocks in each group?

There are ___4___ blocks in each group.

How would you solve this fraction problem without using blocks? What operation could you use?

You could use division!

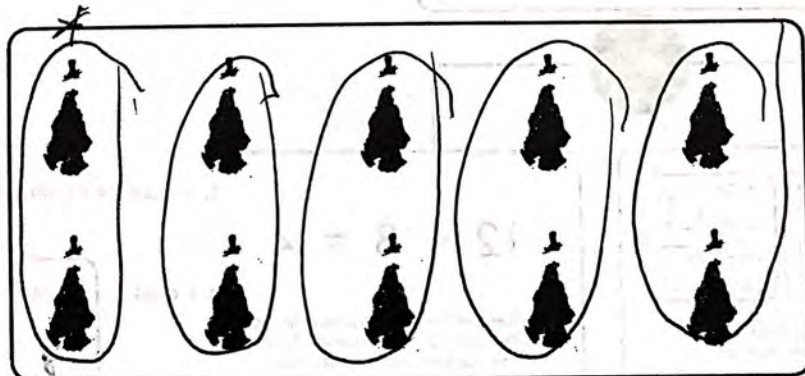| operation of division	÷

Finding $\frac{1}{3}$ of 12 is the same as dividing 12 by 3.
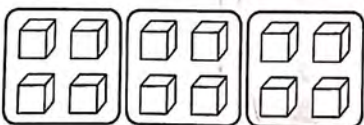
$$12 \div 3 = 4$$

If the 12 blocks are divided into 3 equal groups, there will be 4 blocks in each group. This tells us that one-third of 12 is 4.

Divide the number of blocks in the collection by the denominator of the fraction. The answer is 4.

3. Use division to solve the following fraction problems and write the answers in the

a. $\frac{1}{3}$ of 24
= 24 ÷ 3
= 8

b. $\frac{1}{5}$ of 35
= 35 ÷ 5
= 7

c. $\frac{1}{8}$ of 88
= 88 ÷ 8
= 11

d. $\frac{1}{4}$ of 100
= 100 ÷ 4
= 25

Activity 2

4. Read the story below then solve the word problems by calculating the unit fraction of the collection.

The students of Harbourside Primary School are celebrating Harmony Day. Year 6 Blue, which has 24 students, is taking part in some craft activities. Peter and Anh have been asked by their teacher to get the equipment ready. To do this they need to know how many students are taking part in each activity.
Can you help them solve these problems? The first one has been done for you.

a. $\frac{1}{2}$ of the 24 students are painting flags. They will need one paint brush each..

How many paint brushes are needed altogether?

$\frac{1}{2}$ of 24

$24 \div 2 = 12$ paint brushes

b. $\frac{1}{8}$ of the 24 students are doing origami. They will need one piece of paper each.

How many pieces of paper are needed altogether?

$\frac{1}{8}$ of 24

$24 \div 8 = 3$ pieces of paper

c. $\frac{1}{6}$ of the 24 students are each tie-dying one bandana.

How many bandanas are needed altogether?

$\frac{1}{6}$ of 24

$24 \div 6 = 4$ bandanas

d. The rest of the students are making paper lanterns. They each need a pair of scissors.

How many pairs of scissors will they need?

$24 - (12 + 3 + 4) = 5$ pairs of scissors

Activity 1

All 3D objects have two or more faces. Faces are the flat surfaces on 3D objects.

If we count the faces on this cube, we will find that it has 6 faces.
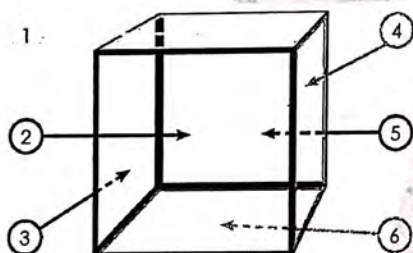
If we count the faces on this square pyramid, we will find it has 5 faces.
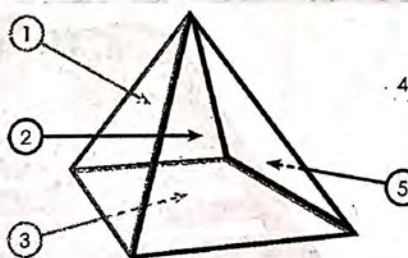
1. Count the faces on these objects, then write the number of faces in the bo

a. triangular pyramid

Number of faces = 4
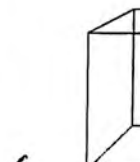
Number of faces = 6

c. pentagonal prism
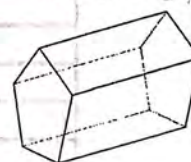
Number of faces = 7

d. oct
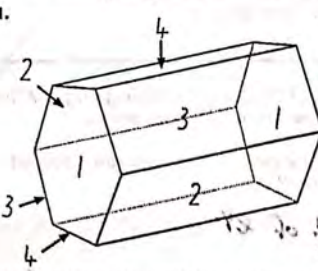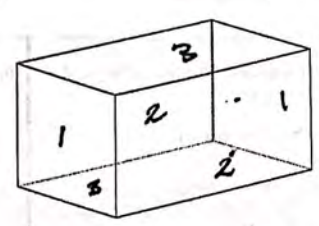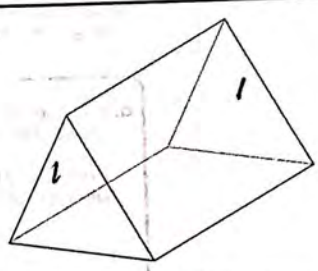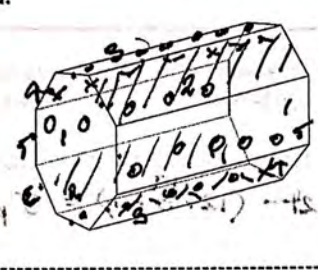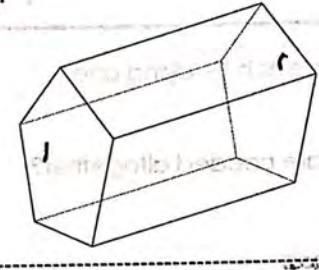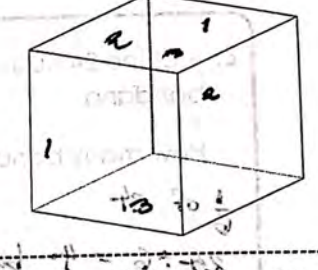
Number of faces = 10

Activity 1

3. Number the parallel faces on the prisms below. In the box below each prism, write the number of pairs of parallel faces. The first one has been done for you.

a.

Pairs of parallel faces: 4

b.

Pairs of parallel faces: 3

c.

Pairs of parallel faces: 1

d.

Pairs of parallel faces: 5

e.

Pairs of parallel faces: 1

f.

Pairs of parallel faces: 3

Activity 2

The dice in this backgammon set are cubes. The counters are cylinders and the case itself is made from a rectangular prism.

**1.** Look around you and try to identify the basic 3D objects in structures you can see. List the structures and the 3D objects that they are constructed from in the table below. To get you started, what is the basic object of the desk or table you are sitting at?

Will change.

Structure	3D objects

Activity 2

1. Draw a line to match each feature to its correct definition.

Edge		Any flat surface of a 3D object.
Vertex		A point where three or more edges of a 3D object meet.
Face		The line formed where two faces meet on a 3D object.

Working Mathematically

I have 6 faces.
I have no parallel faces.
5 of my faces meet at the same point.
The 6th face is opposite the point where the 5 faces meet.

What 3D object am I? *pentagonal pyramid*

Draw your answer below and any notes needed to justify your answer when making your audio recording for your teacher.

Activity 1

$\frac{11}{8}$ improper fraction

$1\frac{3}{8}$ mixed numeral

This fraction has 1 whole and $\frac{3}{8}$ parts of cake.

Now it is your turn to change improper fractions and mixed numerals. Complete the questions below.

4. Shade $\frac{15}{8}$ in the circles below and write it as a mixed numeral in the blank circle.

$\frac{15}{8}$

Answer: $1\frac{7}{8}$

Activity 1

5. Write $1\frac{2}{8}$ as an improper fraction and shade it on the circles below.

$\frac{10}{8}$
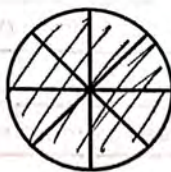
$1\frac{2}{8}$

6. Look at the fraction represented on the circles below. Write it as an improper fraction and mixed numeral.

$\frac{14}{8}$

$1\frac{6}{8}$

7. Choose an improper fraction. Write it in the circle provided and as a mixed numeral then shade it on the circles.

Will differ
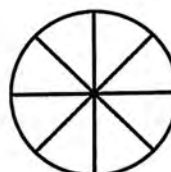
Activity 1

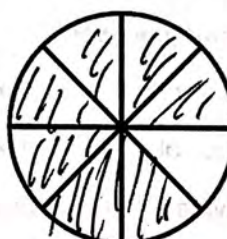When you have improper fractions and mixed numerals on a number line, it is easy to see which ones are equivalent (the same). Look at the examples on the number lines below.

The improper fraction $\frac{10}{8}$ is the same as the mixed numeral $1\frac{2}{8}$.
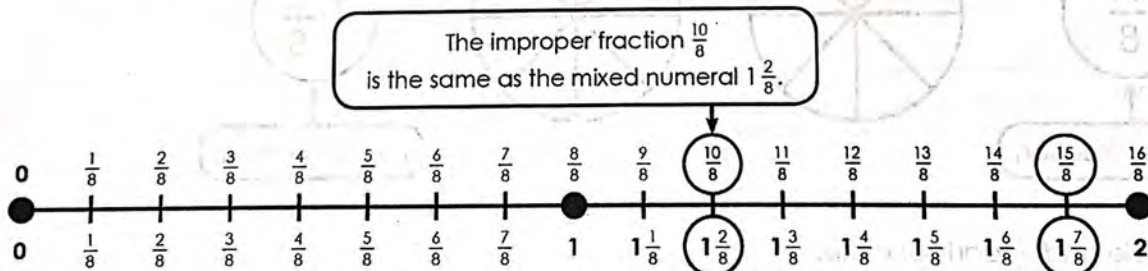
The mixed numeral $1\frac{7}{8}$ is the same as the improper fraction $\frac{15}{8}$.

1. Using the number line above, find the following answers.

a. What is the improper fraction that is the equivalent to the mixed numeral $1\frac{4}{8}$? ___ $\frac{12}{8}$

b. What is the improper fraction that is the equivalent to the mixed numeral $1\frac{6}{8}$? ___ $\frac{14}{8}$

c. What is the mixed numeral that is the equivalent to the improper fraction $\frac{11}{8}$? ___ $1\frac{3}{8}$

d. What is the mixed numeral that is the equivalent to the improper fraction $\frac{13}{8}$? ___ $1\frac{5}{8}$

Question
a
b
c
d

Activity 2

A calculator can be used to help you find a fraction of a collection. When we use a calculator to find a fraction, the order that we key in the operations is a little bit different to how you would do it in your head. If you are using a calculator, you would follow the instructions below for finding $\frac{2}{5}$ of 10 .

| 1. Type the number of the numerator (2) into your calculator. | → | 2. Press the + button. | → | 3. Type the number of the denominator (5) into your calculator. | → | 4. Press the x button. | 5. Type the number of the collection (10) into your calculator. You now have your answer which is 4. |

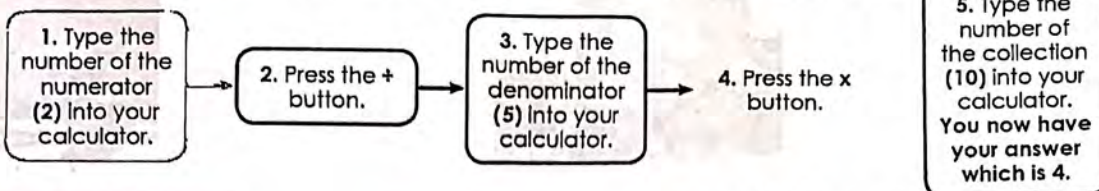King Calculator's sum is: $(2 + 5) \times 10 = 4$

Divide the numerator by the denominator then multiply this answer by the number of the collection.

$(2 + 5) \times 10 = 4$

3. Use your calculator to work out the answers to the following fraction problems. Write the answers in the space provided.

a. $\frac{3}{4}$ of 20	b. $\frac{5}{6}$ of 36	c. $\frac{7}{12}$ of 144	d. $\frac{23}{100}$ of 200
15	30	84	46

Activity 2

4. At lunchtime on Harmony Day, some classes at Harbourside Primary set up a display of their completed craft work. The plan of the playground (made up of 20 squares) should show the areas taken up by each class for their display. Colour in the squares used by each class using the information given below. You may use your calculator to help you.

Playground Plan

a. Year 6 Blue used one-quarter of the space. Use a blue pencil to colour in the correct number of squares on the plan.

b. Year 6 Green used two-fifths of the playground. Colour their area green on the plan.

c. Year 5 Red needed to use three-tenths of the playground. Use a red pencil to colour in their area.

d. How much space was left for Year 5 Orange? What fraction of the playground is their area?

$\frac{1}{20}$ one twentieth

Activity 1

This building in Rome is an octagonal prism.   This pyramid in Paris is a square pyramid.

1. What types of prisms and pyramids are these 3D objects? Name them according to the shape of the base.
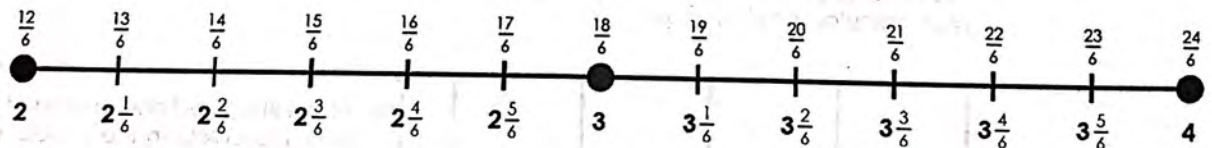
a.	b.	c.	d.
Name: rectangular pyramid	Name: triangular prism	Name: pentagonal pyramid	Name: octagonal prism

Activity 1

2. Write the equivalent improper fractions for the following mixed numerals, using the number line below.

a. $2\frac{5}{6}$ $\frac{17}{6}$ b. $3\frac{2}{6}$ $\frac{20}{6}$ c. $2\frac{3}{6}$ $\frac{15}{6}$ d. $3\frac{4}{6}$ $\frac{22}{6}$

3. Write the equivalent mixed numerals for the following improper fractions, using the number line above.

a. $\frac{13}{6}$ $2\frac{1}{6}$ b. $\frac{19}{6}$ $3\frac{1}{6}$ c. $\frac{16}{6}$ $2\frac{4}{6}$ d. $\frac{23}{6}$ $3\frac{5}{6}$

4. Write the equivalent improper fractions for the following mixed numerals, using the number line below.

a. $4\frac{1}{3}$ $\frac{13}{3}$ b. $7\frac{2}{3}$ $\frac{23}{3}$ c. $5\frac{2}{3}$ $\frac{17}{3}$ d. $8\frac{1}{3}$ $\frac{25}{3}$
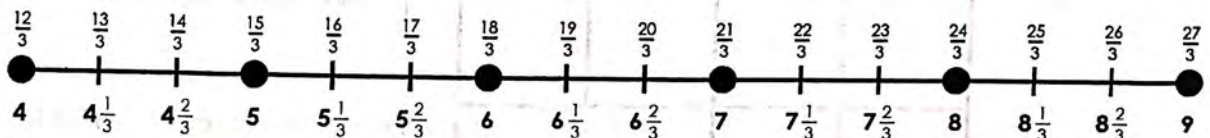

5. Write the equivalent mixed numerals for the following improper fractions, using the number line above.

a. $\frac{19}{3}$ $6\frac{1}{3}$ b. $\frac{26}{3}$ $8\frac{2}{3}$ c. $\frac{14}{3}$ $4\frac{2}{3}$ d. $\frac{16}{3}$ $5\frac{1}{3}$
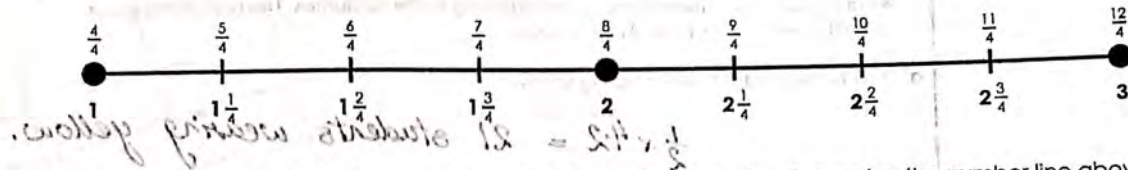
Activity 1

Slide 45

6. Write the equivalent improper fractions for the following mixed numerals, using the number line below.

a. $2\frac{2}{4}$ 10/4 b. $1\frac{1}{4}$ 5/4 c. $2\frac{3}{4}$ 11/4 d. $1\frac{2}{4}$ 6/4

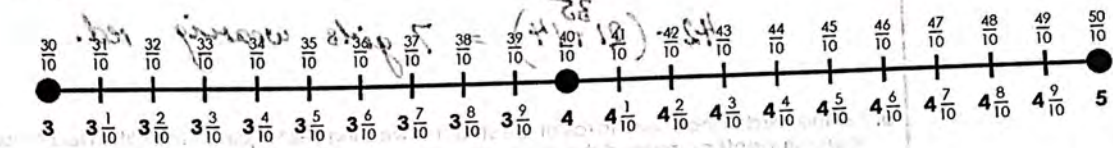7. Write the equivalent mixed numerals for the following improper fractions, using the number line above.

a. $\frac{7}{4}$ 1 3/4 b. $\frac{9}{4}$ 2 1/4 c. $\frac{5}{4}$ 1 1/4 d. $\frac{11}{4}$ 2 3/4

8. Write the equivalent improper fractions for the following mixed numerals, using the number line below.

a. $3\frac{3}{10}$ 33/10 b. $3\frac{8}{10}$ 38/10 c. $4\frac{5}{10}$ 45/10 d. $4\frac{1}{10}$ 41/10

9. Write the equivalent mixed numerals for the following improper fractions, using the number line above.

a. $\frac{36}{10}$ 3 6/10 b. $\frac{32}{10}$ 3 2/10 c. $\frac{49}{10}$ 4 9/10 d. $\frac{44}{10}$ 4 4/10

Slide 47

Activity 2

Solve the following word problems. Show your working.

1. A demonstration of karate is given by twenty-four students. One-third of these karate kids have white belts and $\frac{3}{8}$ of them have green belts. The rest have blue belts.

a. Are there more students with white belts or green belts?

No $\frac{1}{3} \times 24 = 8$ white $\frac{3}{8} \times 24 = 9$ green

b. How many students have blue belts?

$24 - (8 + 9) = 7$ blue belts

c. The karate teacher wants the blue belts and green belts in the front row for the demonstration. How many students will be in the front row?

$7 + 9 = 16$ students in the front row.

Activity 2

2. Forty-two students are performing some Polynesian dances. Half of the students are wearing yellow costumes and $\frac{2}{6}$ are wearing white costumes. The rest of the group are girls wearing traditional red dresses.

a. How many students are wearing yellow?

$\frac{1}{2} \times 42 = 21$ students wearing yellow.

b. How many students are wearing white?

$\frac{2}{6} \times 42 = 14$ students wearing white

c. Only the girls wearing traditional red dresses performed the second dance. How many people are on stage for the second dance?

$42 - (21 + 14) = 7$ girls wearing red. ^{35}

d. For the third dance, two-thirds of the students wearing yellow joined the girls in red dresses on stage. How many students performed the third dance?

$(\frac{2}{3} \times 21) + 7 = 21$ students performed the third dance. ^{14}

Activity 2

Working Mathematically

Restaurant Jean is hosting a special dinner for 60 people.

- One-quarter are eating a main meal of chicken cassoulet
- Five-twelfths are having duck with plum sauce
- Eleven people have requested a vegetarian meal
- The rest of the diners need gluten-free meals.

In the space below, write your answers and any notes needed to justify your answers when making your audio recording.

a. The gluten free meals come with a salad. How many salads will be needed?	$\frac{1}{4} \times 60 = 15$ eating chicken $\frac{5}{12} \times 60 = 25$ eating duck
b. How many people altogether will be served either chicken or duck?	11 vegetarian
c. Which dish is more popular, duck or chicken?	a) $60 - (15 + 25 + 11) = 9$ gluten-free ^{51} b) $15 + 25 = 40$ people c) duck is more popular $25 > 15$
d. The diners are divided evenly among 6 tables. What fraction of the collection are on each table?	d) $60 \div 6 = 10 \quad \therefore \quad \frac{1}{10}$

Monday's Ignition Activity

SOLUTION ID: 55291

ID: 55291   EASY   Next Level
EMOJI PUZZLES FOR DEVELOPING MINDS

3 + 3 + 3 = 9

3 + 11 + 11 = 25

11 + 11 + 12 = 34

3 × 22 + 24 = 90

Solvemoji.com

1/1 (100%)

SOLUTION ID: 55290

ID: 55290   MEDIUM   Next Level
EMOJI PUZZLES FOR DEVELOPING MINDS

8 + 8 + 8 = 24

4 × 4 + 9 = 25

12 × 18 + 12 = 228

12 + 9 × 4 = 48

Solvemoji.com

1/1 (100%)

SOLUTION ID: 55286

ID: 55286   HARD   Next Level
EMOJI PUZZLES FOR DEVELOPING MINDS

20 + 10 = 30

+ ×

7 + 18 = 25

= =

27   180

5 + 21 + 20 = 46

Solvemoji.com

2/2 (100%)

Tuesday's Ignition Activity

⭐

⭐ ⭐

⭐ ⭐ ⭐

SOLUTION ID: 55278

ID: 55278   EASY   Next Level
EMOJI PUZZLES FOR DEVELOPING MINDS

$5 + 3 = 8$
$+$ $+$
$7 + 9 = 16$
$=$ $=$
12 12

1 = x	6 = i
2 = t	7 = q
3 = u	9 = b
5 = s	10 = k

u   s   b

Solvemoji.com

1/1 (100%)

SOLUTION ID: 55271

ID: 55271   MEDIUM   Next Level
EMOJI PUZZLES FOR DEVELOPING MINDS

$12 + 10 = 22$
$\times$ $+$
$11 \times 8 = 88$
$=$ $=$
132 18

3 = d	9 = t
4 = k	10 = b
6 = v	11 = e
8 = l	12 = a

a   b   l   e

Solvemoji.com

2/2 (100%)

SOLUTION ID: 55285

ID: 55285   HARD   Next Level
EMOJI PUZZLES FOR DEVELOPING MINDS

$12 + 7 \times 6 = 54$

$12 + 6 \times 11 = 78$

$11 + 14 + 11 = 36$

$6 \times 7 \times 22 = 924$

Solvemoji.com

0/0 (0%)

Wednesday's Ignition Activity

SOLUTION ID: 55277
ID: 55277   EASY   Next Level
EMOJI PUZZLES FOR DEVELOPING MINDS

$9 + 9 + 9 = 27$

$6 + 9 + 6 = 21$

$5 + 5 + 6 = 16$

$10 \times 6 + 9 = 69$

Solvemoji.com   1/1 (100%)

SOLUTION ID: 55262
ID: 55262   MEDIUM   Next Level
EMOJI PUZZLES FOR DEVELOPING MINDS

$8 + 8 + 8 = 24$

$16 + 16 \times 14 = 240$

$14 \times 14 + 8 = 204$

$4 + 16 \times 14 = 228$

Solvemoji.com   2/4 (50%)

SOLUTION ID: 55284
ID: 55284   HARD   Next Level
EMOJI PUZZLES FOR DEVELOPING MINDS

$7 + 20 + 14 = 41$

$7 + 7 \times 18 = 133$

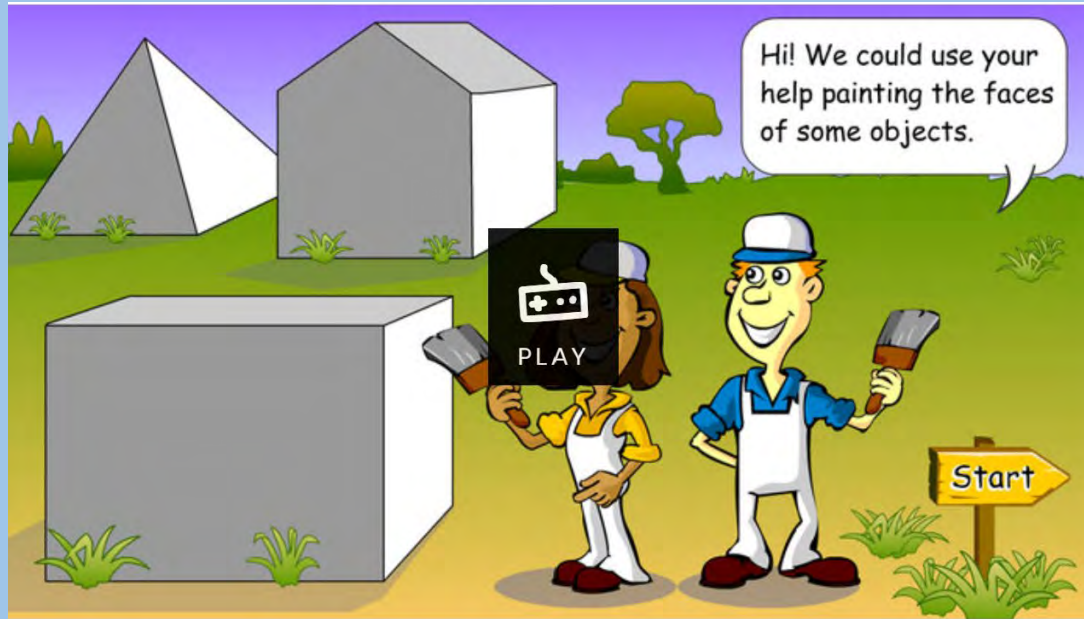$18 + 18 + 20 = 56$

$10 + 9 \times 14 = 136$

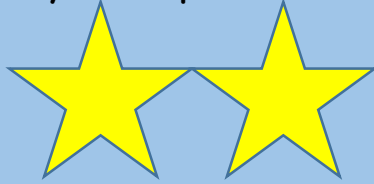Solvemoji.com   0/0 (0%)

Ignition Activity – Revising 3D

Click on the picture to play the game online.

Colour flying objects in 3D in Face Painter Finding Faces 1

Ignition Activity – choose your level

Answers for today will be posted at the end of the week

Ordering Fractions
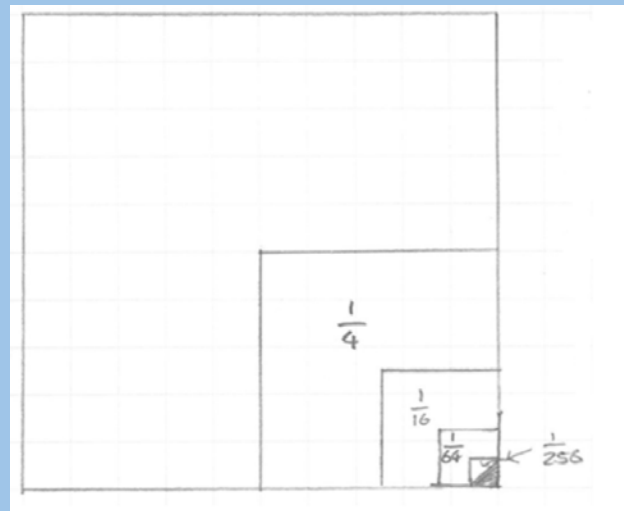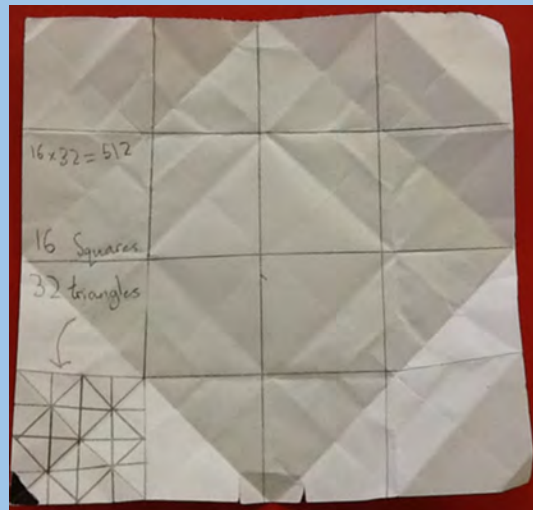
Add Fractions

Multiply Fractions

Friday's Challenge Activity- Bryony's flower

There are amany different solutions **https://nrich.maths.org/7392/solution**

16 x 32 = 512

16 Squares

32 triangles

$\frac{1}{4}$

$\frac{1}{16}$

$\frac{1}{64}$

$\frac{1}{256}$

Another solution:

After folding the flower and shading the triangle, I got another square of paper the same size as the first one, but left it unfolded. I traced the shaded triangle onto the corner of the unfolded square of paper.

Then, I divided the unfolded square into 16 equal squares.

Then, I used a ruler to divide one of the 16 squares into triangles the same size as the shaded one on the flower. I counted the number of triangles in the 16th of the square. There were 32 total triangles in that 16th.

32× 16=512