



## Cormorant Week 15: Learning Project – Heroes and Villains

Age Range: Y3/4

### Weekly English/Topic Tasks

**Monday-** Last week you learnt about comic strips and split a famous story into 6 sections. Now it is time for you to create your own superhero. Your task is to create and draw a superhero with labels. Your labels should include information about their clothes, powers, gadgets and maybe weaknesses. Make sure that your labels are neat and use an arrow to point to the location on the diagram. Maybe design a colour scheme or a logo for your hero. Think about Superman or Wonder Women. They have their own colour scheme, powers and logo. Once you have drawn your superhero and labelled them accurately, Write a small paragraph about them. You could include information about their family, how they got their powers, why they are doing it and where they live and protect.

**Tuesday-** Now that you have your superhero, we need to think about the villain. As you did with the superhero above, your task is to do the same for the villain. See the tasks above to remind you.

**Wednesday-** Great. So now you have a superhero and a villain but without a story line. Your task for today is to create a storyline for your comic. Think about comic books or superhero films that could help you. I really like The Incredibles. It has a great storyline. See below.

- Lots of superheroes around the world.
- A little boy who isn't a superhero but wants to be one.
- The little boy is rejected by a superhero.
- The boy grows up into a super villain.
- He captures and kills superheroes.
- In the end, he needs the superheroes to save him and the world.

This is a fantastic storyline. I wonder how good yours will be.

I have attached a story mountain so you can plan your story's key parts.

**Thursday-** Yesterday your task was to create a superhero storyline. You should now have a plan split into key parts on the story mountain sheet. It is time for you to complete your first draft. I would like you to write your story with as much information as you can. For example, "Turtle man walked slowly across the beach wearing a dull brown cape, shiny green leggings and a bright white mask". Hopefully this sentence paints a picture in your head of the appearance of my superhero. Be as descriptive as possible. Remember to use adverbs to describe the verb in your sentences. For example, "He turned quickly and looked worryingly at the suspicious man in the distance". In this sentence the words 'turned' and 'looked' are the verbs and the adverbs are quickly and worryingly. They tell us how he turned and how he looked.

**Friday-** Yesterday you started or completed your draft for your superhero story. Today is it time to finish it or edit it. I would like to you read your superhero story to someone. When we read our writing aloud, we normally find the errors. Sometimes if we do it to ourselves, our brains add in words that are not on the page. Add words or remove them as you go until you have a finished piece of writing. I would really like to see these stories so if you could send a picture to Mrs Brooks or Mrs Sanders that would be great.

## Weekly Maths Tasks- Yr3 Answers below

**Monday-**

Menu

Summer 6 Monday

Place Value

Write 854 in words.

Reveal answer

Problem Solving

Alison leaves the beach at 5:55 p.m. She arrives at the bus stop at 6:25 p.m.

How long does the walk to the bus stop take her?

Reveal answer

+ and -

$845 + 70 =$

Reveal answer

666 - 300 =

Reveal answer

× and ÷

$40 \times 10 =$

Reveal answer

200 ÷ 50 =

Reveal answer

Reasoning

I have sorted these fractions in order from greatest to smallest.

$\frac{7}{8}$ 
 $\frac{1}{8}$ 
 $\frac{5}{8}$

Is Henry correct?

Explain why.

## Weekly Maths Tasks- Yr4 Answers below

**Monday-**

### Describe Position

### Notes and Guidance

Children are introduced to coordinates for the first time and they describe positions in the first quadrant.

They read, write and use pairs of coordinates. Children need to be taught the order in which to read the axes, x-axis first, then y-axis next. They become familiar with notation within brackets.

### Mathematical Talk

Which is the x-axis?

Which is the y-axis?

In which order do we read the axes?

Does it matter in which order we read the axes?

How do we know where to mark on the point?

What are the coordinates for \_\_\_\_\_?

Where would ( \_\_, \_\_ ) be?

### Varied Fluency

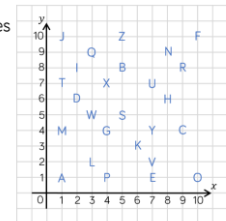
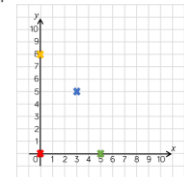
Create a large grid using chalk or masking tape. Give the children coordinates to stand at. Encourage the children to move along the axis in the order they read them.

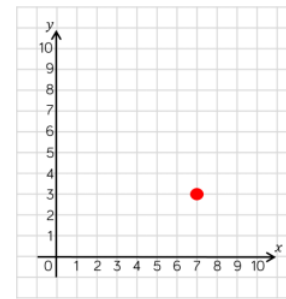
Write the coordinates for the points shown.

✖ ( \_\_, \_\_ ) ✖ ( \_\_, \_\_ )

✖ ( \_\_, \_\_ ) ✖ ( \_\_, \_\_ )

Write out the coordinates that spell your name.





The point is plotted at (7, 3)



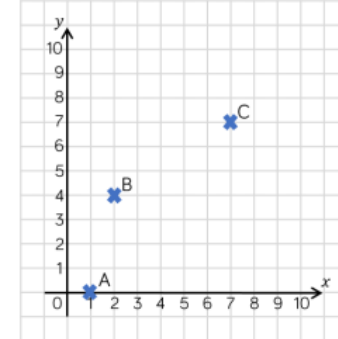
Teddy



Rosie

The point is plotted at (3, 7)

Who is correct?  
What mistake has one of the children made?



Which clue matches which coordinate?

Clue 1 My  $x$  coordinate is half of my  $y$  coordinate.

Clue 2 My  $y$  coordinate is less than my  $x$  coordinate.

Clue 3 Both my coordinates are prime numbers.

## Tuesday-

### Construct 3-D Shapes

#### Notes and Guidance

Children make 3-D shapes (cubes, cuboids, prisms, cylinders, pyramids, cones, spheres) using construction materials.

They use correct mathematical language to describe the shapes they have made (edges, faces, vertices, curved surfaces).

#### Mathematical Talk

Can you describe your shape using edges, faces, vertices, curved surfaces?

What is the same and what is different about your shape compared to your partner's?

What do the straws represent?

What does the Play-Doh represent?

How many straws/balls of Play-Doh do you need to create a \_\_\_\_\_?

Why can't you create a sphere or cylinder using this technique?

#### Varied Fluency

Children make a 3-D shape using Play-Doh/clay/plasticine/polydron.

Ask them to make a different one to their partner. Write down the similarities and differences between them. Discuss what the properties of each shape are.

Use straws and Play-Doh to create a model of a cube.



What other 3-D shapes can you create?

Cut and fold these into 3-D shapes.



What shapes have you created?

## Tuesday-

### Draw on a Grid

#### Notes and Guidance

Children develop their understanding of coordinates by plotting given points on a 2-D grid.

Teachers should be aware that children need to accurately plot points on the grid lines (not between them).

They read, write and use pairs of coordinates.

#### Mathematical Talk

Do we plot our point on the line, or next to the line?

How could we use a ruler to help plot points?

In which order do we read and plot the coordinates?

Does it matter which way we plot the numbers on the axis?

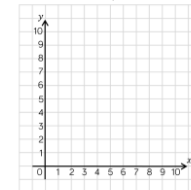
What are the coordinates of \_\_\_\_\_?

Where would (\_\_\_\_, \_\_\_\_ ) be?

Can you show \_\_\_\_\_ on the grid?

#### Varied Fluency

Draw the shapes at the correct points on the grid.



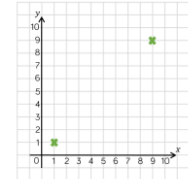
(7, 8)

(4, 6)

(9, 1)

(10, 0)

Plot two more points to create a square.



Plot these points on a grid.

(2, 4) (4, 2) (5, 8) (7, 6)

What shape has been created?

I have 9 straws and 6 balls of Play-Doh.



What 3-D shape can I create using all of the straws and Play-Doh? Have a go at making it.

Rosie says,



I can create a model of a square-based pyramid using 3 straws and 3 balls of Play-Doh.

Explain the mistake Rosie has made.

How many straws and balls of Play-Doh would you need to create a pyramid?

### True or false?

- You can cut out lots of equal squares and make a 3-D shape from them.
- You can cut out some circles and rectangles and make a 3-D shape from them.

What shapes could be made by plotting three more points?



When you are plotting a point on a grid it does not matter whether you go up or across first as long as you do one number on each axis.



Do you agree with Amir? Convince me.

### Always, Sometimes, Never.


The number of points is equal to the number of vertices when they are joined together.

### Wednesday-

Menu


**Place Value**


Use the correct symbol to compare these numbers:

685  586


Reveal answer


**+ and -**

694 + 8 =  Reveal answer

403 - 6 =  Reveal answer

**x and ÷**


90 x 8 =  Reveal answer

550 ÷ 5 =  Reveal answer

Summer 6 Wednesday


**Problem Solving**

Find two different ways to complete this part-whole model using only fractions.




Reveal answer

**Reasoning**



Is Henry correct? Explain why.



### Wednesday-

#### Move on a Grid

#### Notes and Guidance

Children move shapes and points on a coordinate grid following specific directions using language such as: left/right and up/down. Teachers might want to use a small 'object' (e.g. a small cube) to demonstrate the idea of moving a point on a grid. They apply their understanding of coordinates when translating by starting with the left/right translation followed by up/down.

#### Mathematical Talk

Can you describe the translation?

Can you describe the translation in reverse?

Why do we go left and right first when describing translations.

What are the coordinates for point \_\_\_\_\_?

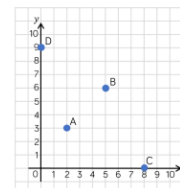
Write a translation for D for your partner to complete.

What do you notice about the new and original points?

What is the same and what is different about the new and original points?

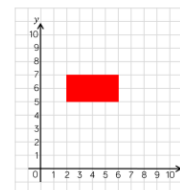
#### Varied Fluency

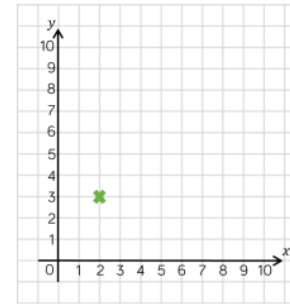
- Place a small cube on the grid at coordinate (1, 1). Move your cube 1 up. Move your cube 1 down. What do you notice? Now move your cube 3 to the right. Move your cube 3 to the left. What do you notice?



- Translate A 6 right and 3 down. Record the coordinates before (\_\_, \_\_) and after (\_\_, \_\_).
- Translate B and C 4 left and 3 up. Record the coordinates before (\_\_, \_\_) and after (\_\_, \_\_).

- Translate the rectangle 2 left and 3 up. Write down the coordinates of each vertex of the rectangle before and after the translation.





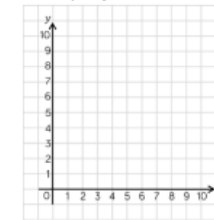
Ron translates the point (2, 3), but realises that it has returned to the same position.

What translation did he do?

Is there more than one answer?

Here is a game to play in pairs:

Each player needs:



1 small cube

One barrier (e.g. a mini whiteboard)

The first player places a cube on their grid. They describe the original position and perform a translation.

The second player listens to the instructions and performs the same translation.

They check to see if they have placed their cube at the same coordinate.

Swap roles and repeat several times.

Thursday-

**Place Value** [Reveal answer](#)

Put these numbers in order from greatest to smallest:

548 578 458 587 485

○ ○ ○ ○ ○

**Problem Solving** [Reveal answer](#)

The clocks show the time that Alison entered the gift shop and the time that she left.

How long was Alison inside the gift shop?

Entered Left

**Reasoning**

$\frac{7}{8} + \frac{5}{8} = \frac{2}{0}$

Is Alison correct? Explain why.

**+ and -**

$146 + 53 =$  [Reveal answer](#)

$578 - 54 =$  [Reveal answer](#)

**x and ÷**

$6 \times 30 =$  [Reveal answer](#)

$800 \div 80 =$  [Reveal answer](#)

Thursday-

Describe Movement

Notes and Guidance

Children describe the movement of shapes and points on a coordinate grid using specific language such as: left/right and up/down. Sentence stems might be useful. They start with the left/right translation followed by up/down.

Teachers should check that children understand the idea of 'corresponding vertices' when describing translation of shapes (e.g. vertex A on the object translates to vertex A on the image).

Mathematical Talk

Can you describe the translation?

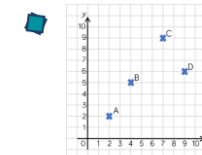
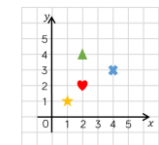
Can you describe the translation in reverse?

Can you complete the following stem sentence:

Shape A is translated \_\_\_ left/right and \_\_\_ up/down to shape B

Varied Fluency

Describe the translation from:



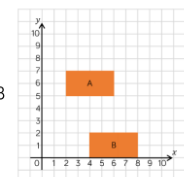
Describe the translation from: A to B B to C C to D D to A

Plot two new points and describe the translations from A to your new points.

Describe the translation of shape A to shape B.

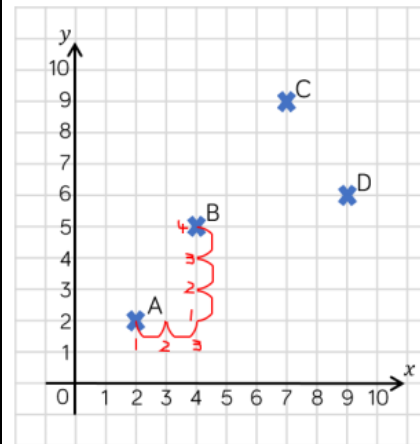
Describe the translation of shape B to shape A.

What do you notice?





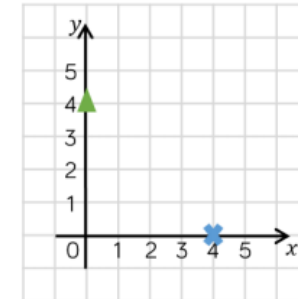
Tommy has described the translation from A to B as 3 right and 4 up.



Can you explain his mistake?

△ to × is 4 right and 4 down.

× to △ is 4 left and 4 up.



Can you plot other pairs of points where to move between them, you travel the same to left or right as you travel up or down?

What do you notice about the coordinates of these points?

Friday-

Menu

Summer 6 Friday

Place Value

What are the next three numbers in this sequence?

24 32 40

+ and -

361 + 45 =

623 - 31 =

120 × 8 =

40 ÷ 8 =

Problem Solving

This table shows how many ice creams were bought at the seaside.

Strawberry	5
Vanilla	4
Chocolate	

If half of the ice creams bought were chocolate, what number is missing from the table?

Reasoning

I went on holiday for  $\frac{1}{3}$  of the days in June. I went away for a fortnight.

Is Henry correct? Explain why.

Friday-

Menu

Summer 6 Friday

+ and -

2870 + 130 =

4900 - 1700 =

× and ÷

6 × 5 × 7 =

50 ÷ 9 =

Place Value

What are the next three numbers in this sequence?

70 63 56

Problem Solving

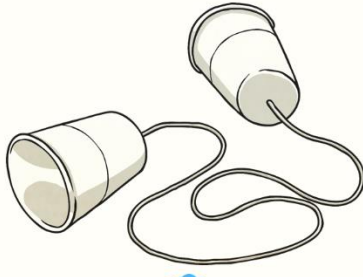
A film is 182 minutes long. How long is the film in hours and minutes?

Reasoning

These four bottles have a total capacity that is less than one litre.

Is Harry correct? Explain your reasoning.

## String Telephone



## Aim

- I can explore how sounds change over distance.

## Success Criteria

- I can identify how sounds change over distance.
- I can identify sounds at a distance.
- I can create a string telephone and explain how sound travels through it.

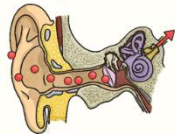
## Travelling Sounds

Sounds get quieter as the distance between the sound source and your ear increases.

Sounds travel as vibrations. As the sound waves travel, the particles of whatever they are travelling through vibrate, or move quickly on the spot. The further the vibrations travel, the more they spread out. As they spread out through more and more particles, the vibrations become smaller and smaller. This causes the sound to get quieter and quieter.

Think of dropping a leaf into a pond. The very first ripples directly around the leaf will be very large, but as the ripples spread out across the pond, they will get smaller and smaller until eventually they disappear.

This is why sounds get quieter and quieter as you move further away from the source, until you eventually can't hear the sound at all.



## Travelling Sounds

You can see the ripples getting smaller as they spread out across the pond, until they eventually disappear. This is like the way the vibrations of sound get smaller as they spread out over distance, getting quieter and quieter.



## Sound over Distance



Try this investigation to explore how sounds change over distance.

Sit near to a ringing alarm clock and think about how loud it sounds. Then move one metre away and again listen to how loud it is. Continue moving away one metre at a time, stopping each metre to listen to how loud the alarm sounds.

Now choose one member of your class and place a blindfold on them! Sound the alarm clock a certain distance away from them. Can they tell the distance the alarm is away from them just by listening to how loud it sounds? Let several people have a go.

Who is closest at guessing the distance? Did anyone get it exactly right?



## Telephone Transmission



Telephones are used to transmit the sound of people's voices over long distances.

When you speak into a telephone, the sound energy in your voice is turned into electrical energy, which is transported down a wire to the other person's telephone. The electrical energy is converted back into sound energy, and they can hear what you are saying!

Your challenge today is to create a string telephone that will transmit the sound of your voice over a distance.

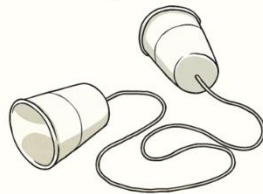


## Telephone Transmission



The vibrations from the sound of your voice cannot continue moving as far as your partner's ear. The vibrations get smaller and stop before they reach your partner.

Now use the instructions on the String Telephone Activity Sheet to construct your string telephone.



Stand the same distance apart as you did earlier. Use your telephone to speak to each other. Remember to use your normal speaking voice. You should be able to hear each other now!

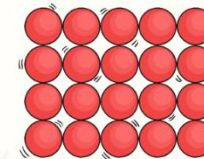
## Telephone Transmission

How does your telephone work?

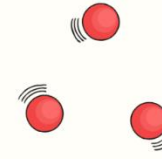
The string and the cups are solid, so the particles are much closer together than the particles in the air, which is a gas.

The sound energy can travel from particle to particle far easier in the solid string telephone, so the sound of your voice is louder over the same distance than it was in the air.

Solid Particles



Gas Particles





The activities below can be attempted over the next couple of weeks and into the summer holidays.

- **Transport Inventors** - Ask your child to find out about famous transport inventors such as [Henry Ford](#) and [The Wright Brothers](#). Create fact files about these inventors. Can your child draw a sketch of different modes of transport **then** and **now**? Can they place different modes of transport on a timeline using their invention date?
- **Colourful Collage** - Ask your child to create their own transport collage. Encourage them to draw, colour or paint a variety of vehicles or make a large collage of one vehicle. Ask them to use bold colours to really make their vehicles stand out! The collage could be made using cut up squares from magazines and leaflets.
- **Obstacle Course** - Ask your child to find any toy transport (cars, trains, etc) they may have at home, then they can design an obstacle course for their vehicle to travel around. This could be on a track or floor involving ramps inside or in the garden. Another idea - get each family member to make a paper aeroplane and throw each one in turn and see whose travels the furthest. Ask your child to measure the lengths of the distance travelled and record these on a bar chart.  
**Recommendation at least 2 hours of exercise a week.**
- **Let's Talk Transport** -Talk as a family about transport in your life. Talk about how you get to school and work. Do you get your food delivered? Does anyone in the family operate a mode of transport? Is it their job? Discuss the first family car owned. Ask your child to mind map all of the ways your family relies on transport and then to imagine a life without it.
- **Transport Around the World** - Ask your child to look at how people travel around in India. Research online for - Buses, cycle-rickshaws, autorickshaws, e-rickshaws, tempos (big, brutal-looking autorickshaws), taxis, boats, tongas (horse-drawn carts), metros and urban trains provide transport around India's cities. Encourage them to compare this to Venice and how the people there travel around (gondola and sandolo tours all around the city). Can your child design a new vehicle suitable for each of these places thinking carefully about suitable and local materials?
- **Is it a Bird? Is it a Plane? Is it a paper aeroplane-** Look at [this link](#) and choose a few different paper aeroplanes to make. Which ones flies the best? Why do you think that is? Could you modify the design at all to make it even better? Then think about how you are going to test them, how you can make it a fair test, and what results you want to find. Make a chart to show your results! (This is really about enjoying making and testing the planes!)
- **Coming down without a bump! –** Using everyday household objects, you need to make a parachute that works effectively. Your challenge is to make it work well enough to hold an egg and stop it from breaking when you drop it from a height (and upstairs window!) Make sure you test your parachute before you put the egg in it! (NB – it's worth hard-boiling the egg first to stop it from being too messy!)
- **Beep beep! -** Make a balloon powered car using the instruction [here](#). Can you make the car more efficient? Can you decorate it so that it looks like a car you would like to be seen in!?
- **Faster Than a Speeding Bullet...Train-** The Shanghai Maglev, also known as Shanghai Transrapid, is currently the fastest train in the world, running between Shanghai and Beijing in China. Challenge your child to be just as speedy and complete the following 5 activities as fast as possible: Star jumps, tuck jumps, press-ups, squats and lunges. Ask them to record how many repetitions of each activity they can perform in 1 minute. Can they beat their personal best? Challenge them to record their heart rate (beats per minute) after each activity. **Recommendation at least 2 hours of exercise a week.**
- **Make and Do - Make it Go!-** Support your child to try this [hover balloon activity](#). You will need the following equipment: CD, bottle top with push/pull closure, like those on some sports drinks or water bottles, blu-tack or glue and a balloon. Alternatively, they could have a go at creating a [baking powder powered boat](#). You will need the following equipment: empty water bottle, baking powder, kitchen roll or tissue, scissors, straw, vinegar, Sellotape. If you don't have access to this equipment, your child can watch and read about the experiments and can discuss with you their favourite, providing reasons for their opinions.



## Additional learning resources parents may wish to engage with

- [CODE Maths Hub Daily Fluency Activities](#) -
- <https://www.topmarks.co.uk/maths-games/daily10> - arithmetic challenges
- [BBC Bitesize](#) - Lots of videos and learning opportunities for all subjects.
- <https://www.thenational.academy/> A large selection of video lessons and learning resources. These cover a range of subjects including maths, English, art and languages.
- [Classroom Secrets Learning Packs](#) - Reading, writing and maths activities for different ages.
- [Twinkl](#) - Click on the link and sign up using your email address and creating a password. Use the offer code UKTWINKLHELPS.

### YR3 answers

**Place Value**  
Write 854 in words.  
**eight hundred and fifty-four**

**Problem Solving**  
Alison leaves the beach at 5:55 p.m.  
She arrives at the bus stop at 6:25 p.m.  
How long does the walk to the bus stop take her?  
**30 minutes or half an hour**

**Reasoning**  
I have sorted these fractions in order from greatest to smallest.  
 $\frac{7}{8}$   $\frac{1}{8}$   $\frac{5}{8}$   
Is Henry correct?  
**Explain why.**

**+ and -**  
 $845 + 70 = 915$   
 $666 - 300 = 366$

**× and ÷**  
 $40 \times 10 = 400$   
 $200 \div 50 = 4$

### YR4 answers

Teddy is correct.  
Rosie has read the  
y-axis before the  
x-axis.

Clue 1 - B  
Clue 2 - A  
Clue 3 - C



True – for  
example a cube.

True – a cylinder.

Rosie thinks that  
because a pyramid  
has some  
triangular faces  
she will only need  
3 straws/balls of  
Play-Doh.

You would need 8  
straws and 5 balls  
of Play-Doh to  
make a square-  
based pyramid,  
and 6 straws and  
4 balls of Play-  
Doh to make a  
triangle based  
pyramid.

The children could  
make a range of  
quadrilaterals  
dependent on  
where they plot  
the points.  
If children plot  
some of the points  
in a line they could  
make a triangle.

Amir is incorrect.  
The  $x$ -axis must  
be plotted before  
the  $y$ -axis.  
Children prove this  
by plotting a pair  
of coordinates  
both ways and  
showing the  
difference.

Sometimes.  
If points are  
plotted in a  
straight line they  
will not create a  
vertex.

**Place Value**

Use the correct symbol to compare these numbers:

$$685 > 586$$

+ and -

$$694 + 8 = 702$$

$$403 - 6 = 397$$

× and ÷

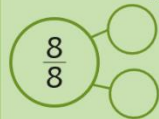
$$90 \times 8 = 720$$

$$550 \div 5 = 110$$

**Problem Solving**

Find two different ways to complete this part-whole model using only fractions.

Accept answers, such as:



$$\frac{1}{8} \text{ and } \frac{7}{8}$$

$$\frac{2}{8} \text{ and } \frac{6}{8}$$

$$\frac{3}{8} \text{ and } \frac{5}{8}$$

$$\frac{4}{8} \text{ and } \frac{4}{8}$$

**Reasoning**

$$\frac{1}{4} \text{ is less than } \frac{7}{20}$$

Is Henry correct?

Explain why.



There could be a range of answers, for example:

Translate 1 left and 1 right

Translate 1 left, 1 right, 2 up and 2 down

**Place Value**

Put these numbers in order from greatest to smallest:

548 578 458 587 485

587 578 548 485 458

+ and -

$$146 + 53 = 199$$

$$578 - 54 = 524$$

× and ÷

$$6 \times 30 = 180$$

$$800 \div 80 = 10$$

**Problem Solving**

The clocks show the time that Alison entered the gift shop and the time that she left.

How long was Alison inside the gift shop?



9 minutes

**Reasoning**

$$\frac{7}{8} + \frac{5}{8} = \frac{2}{0}$$

Is Alison correct?

Explain why.



Tommy has counted one move to the right when he has not moved anywhere yet. He has done the same for one move up when he has not moved up one space yet.

Possible answers include:

(0,1) (1,0)  
(0,2) (2,0)  
(0,3) (3,0)  
(0,5) (5,0)  
(1,1) (3,3)  
(0,0) (4,4)



**Place Value**

What are the next three numbers in this sequence?

**+ and -**

$$361 + 45 = 406$$

$$623 - 31 = 592$$

**× and ÷**

$$120 \times 8 = 960$$

$$40 \div 8 = 5$$

**Problem Solving**

This table shows how many ice creams were bought at the seaside.

Strawberry	5
Vanilla	4
Chocolate	9

If half of the ice creams bought were chocolate, what number is missing from the table?

**Reasoning**

I went on holiday for  $\frac{1}{3}$  of the days in June. I went away for a fortnight.



Is Henry correct?

Explain why.

**+ and -**

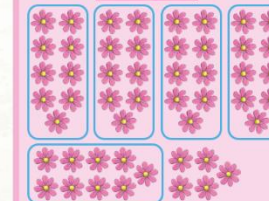
$$2870 + 130 = 3000$$

$$4900 - 1700 = 3200$$

**× and ÷**

$$6 \times 5 \times 7 = 210$$

$$50 \div 9 = 5 \text{ remainder } 5$$

**Place Value**

What are the next three numbers in this sequence?

**Problem Solving**

A film is 182 minutes long. How long is the film in hours and minutes?

3 hours and 2 minutes

**Reasoning**

These four bottles have a total capacity that is less than one litre.

Is Harry correct? Explain your reasoning.