



Razorbill Week 13 : Learning Project – Scientists and inventors Online

Age Range: Y4/5

Weekly English/Topic Tasks

Monday- Alexander Graham Bell is credited with creating the first telephone. Phones have changed a lot since then. Research how phones have changes over the past 100 years. Create a time line showing the 10 biggest innovations in the development of telephones up to the present day.

Tuesday- Non-chronological reports

A non-chronological report gives factual information but not necessarily in time order. Here is an example report. Using the questions below, read through the text identifying the key features. If any of the features are missing, try to add them.

- *Does it have a title to tell you what the writing is about?*
- *Is there a general opening statement?*
- *Are there separate paragraphs about different parts of the report?*
- *Is there technical vocabulary or words specific to the subject of the report?*
- *Is it in the same tense all the way through? (past, present or future)*
- *Is there a concluding statement?*
- *Are there diagrams or illustrations or pictures to help with the report?*

The Pyramids of Ancient Egypt¹

The pyramids were tombs that were built for the pharaohs – the kings. The size of the pyramid is believed to signify the level of importance of the person entombed inside.⁴ Due to their belief that a mummified person would live forever, the ancient Egyptians built these tombs to keep their bodies safe when they departed from the world.

It is not known how many men it took to build a pyramid, with estimates ranging from 2000 to 100,000! Pyramid building would always happen when the Nile was flooded which is thought to be because the water was used to transport the stone.

The Tomb³

From the outside, the pyramids⁵ look quite simple but inside were various passages and chambers, some with secret entrances and trapdoors.

The mummified⁵ body of the pharaoh⁵ would be placed in a sarcophagus⁵ (a large stone coffin), which was then surrounded by other chambers containing precious items that were thought to be needed in the afterlife. Other chambers might be used for family members.

Hieroglyphics³

The chambers and passages were intricately decorated with pictures and hieroglyphics⁵. At the Pyramid of Unas, many hieroglyphics were found – they are believed to tell stories of the King, religious tales, requests for help from the gods in the journey to the afterlife and serve as a warning to grave robbers!

The Sphinx³

The sphinx⁵ is a mythical creature with a Pharaoh's head, the body of a lion and sometimes the wings of a large bird. The word means 'father of dread' or 'the terrifying one'. Made of limestone, it sits near the Pyramids of Giza and is the largest stone statue in the world, at over 73m long, 19m wide and 20m high. It was believed to have been built during the reign of Khafra with the face made in his likeness. In mythology, the sphinx is believed to have asked impossible riddles and eaten anyone who answered incorrectly.

Wednesday-

Using your timeline from Monday and what you learnt about non-chronological reports yesterday, create a report about the development of phones and the innovations that have taken place. Start from Alexander Graham Bell and work up to the modern day. Please upload your report to the Google classroom work set page.

Thursday- Inventing something new is generally just the first step. As with the telephone, inventions are constantly improved on to refine them and make them better. This innovation can be applied to any product. Watch this clip on how a mountain bike is built. <https://www.bbc.co.uk/bitesize/clips/zng4q6f>
Design a bike to use around Padstow. Does it need suspension? What type of tyres? Gears? Special features? Try to be adventurous and design something that could be the next step in the innovation of cycling. Include notes on the functions of your bike and how it would be made.

Friday- Design challenge!

Watch this video. <https://www.bbc.co.uk/bitesize/clips/zgm8mp3> Can you create your own lamp from a single folded piece of paper and some tape?

This video about 3D nets will help you with your design process.

<https://www.bbc.co.uk/bitesize/topics/zt7xk2p/articles/z247tv4>

Can your lamp support its own weight? Could you add an led light to make an actual working lamp? Send in photos if you can!



Weekly Maths Tasks- Yr5

Monday-

Place Value

[Reveal answer](#)

Write one hundred and four thousand and forty-nine in numerals:



+ and -

[Reveal answer](#)

$$43\ 100 + 1900 =$$

[Reveal answer](#)

$$80\ 200 - 300 =$$

× and ÷

[Reveal answer](#)

Use a written method to solve this calculation:

$$9333 \times 8 =$$



Fractions

[Reveal answer](#)

What number is hidden in these equivalent fractions?

$$\frac{1}{8} = \frac{\text{?}}{24}$$

Problem Solving

[Reveal answer](#)

Write all the factor pairs of 24.



Reasoning

Four cubed is also eight squared, five cubed will be ten squared.

Is Jamil correct?

Explain your reasoning.



Weekly Maths Tasks- Yr4

Monday-

+ and -

$$2800 + 400 =$$

[Reveal answer](#)

$$6030 - 700 =$$

[Reveal answer](#)

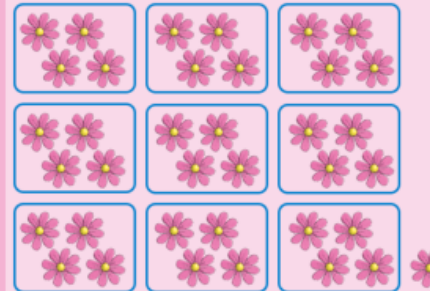
× and ÷

$$3 \times 4 \times 7 =$$

[Reveal answer](#)

$$37 \div 4 =$$

[Reveal answer](#)



Place Value

[Reveal answer](#)

Write four thousand and thirty-six in numbers.



Problem Solving

[Reveal answer](#)

Alison buys a book for £3.75 and pays with a £5 note. With which coins could she receive her change?

Reasoning

Is my part-whole model correct?



Is Jamil correct?

Explain your reasoning.



Tuesday- Watch the BBC bitesize link about types of angles and also parallel lines. <https://www.bbc.co.uk/bitesize/topics/zb6tyrd>
Attempt the tasks that are linked to the videos.
Can you find examples of each type of angle and each type of line at home? Can you find any links between the types of angles and the research you did on triangles last week?

Tuesday- Watch the BBC bitesize link about types of angles and also parallel lines. <https://www.bbc.co.uk/bitesize/topics/zb6tyrd>
Attempt the tasks that are linked to the videos.
Can you find examples of each type of angle and each type of line at home?

Wednesday-

Place Value

Reveal answer

Round 76 500 to the nearest thousand.



+ and -

Reveal answer

$$16\,400 + 4000 =$$

Reveal answer

$$45\,000 - 900 =$$

× and ÷

Reveal answer

Use a written method to solve this calculation:

$$3887 \times 6 =$$

Fractions

Reveal answer

Convert this mixed number into an improper fraction:

$$4\frac{3}{5} =$$

Problem Solving

Reveal answer

Complete this calculation:

$$3 \times 15 =$$

$$- 15$$

Reasoning



This pentagon is regular because all the sides are the same length.



Is Jamil correct?

Explain your reasoning.

Wednesday-

+ and -

$$35 + 66 =$$

Reveal answer

$$500 - 201 =$$

Reveal answer

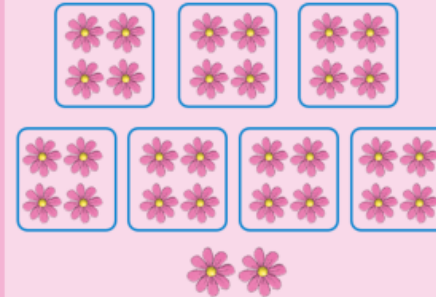
× and ÷

$$9 \times 5 \times 8 =$$

Reveal answer

$$30 \div 4 =$$

Reveal answer



Place Value

Reveal answer

Put these numbers in order from smallest to greatest:

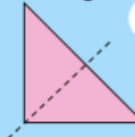
6218 6281 6182 6128

Problem Solving

Find three different ways to complete this part whole model.



Reasoning



I have drawn a line of symmetry on this triangle.

Is Jamil correct?

Explain your reasoning.



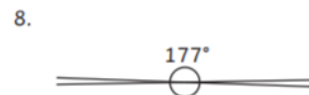
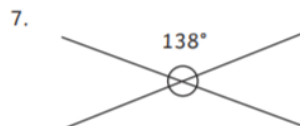
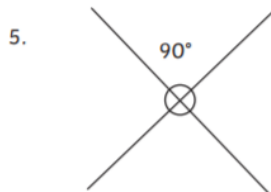
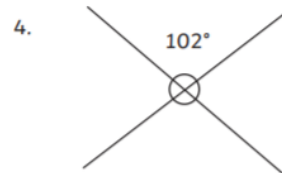
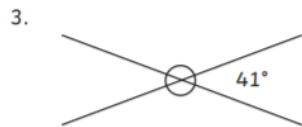
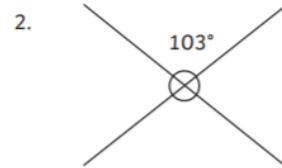
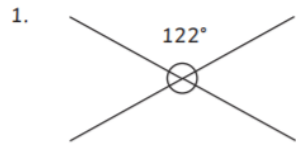
Thursday-

The angles in a full circle add up to 360 degrees. When split into 4 parts each opposite quadrant will have the same value. For example, in Q1 the top quadrant has a value of 122 degrees. The bottom quadrant will also be 122 degrees. $122+122=244$.

To find the remaining angles we then do: $360 - 244 = 116$.

The left and right quadrants will have the same value. 116 divided by 2 = 58. So the left and right quadrant will both have values of 58 degrees.

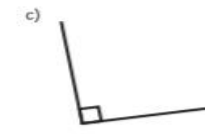
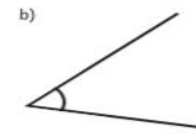
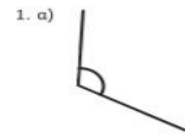
Calculate and label the size of all the angles where each pair of lines intersect.



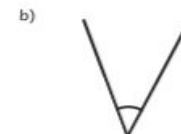
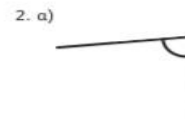
Thursday-

Using your knowledge of angles from last week, try to order these from smallest to largest.

Order these angles from smallest to largest.



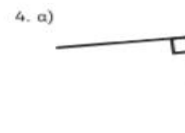
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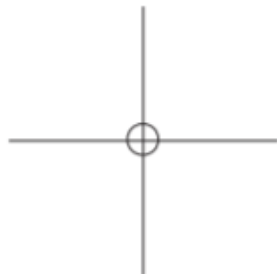
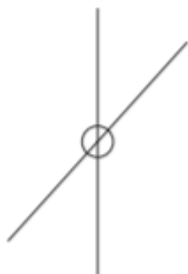


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Complete the following sentences to explain how to calculate the angles where 2 lines intersect.

1. When two lines intersect the total of two adjacent angles is _____.
2. If one angle is known, the other can be found by _____.
3. When two lines intersect the total of all the angles _____.
4. The angles opposite the point are _____.

Here are 4 pairs of lines. Estimate the size of each angle, using what you know about angles at a point.



9. a)



b)



c)



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10. a)



b)



c)



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Challenge

Draw three angles in order of size from smallest to largest.

Friday-

Place Value

Reveal answer

Which symbol completes this number sentence?

63 036



63 006

+ and -

Reveal answer

$$276\ 000 + 24\ 000 =$$



Reveal answer

$$672\ 000 - 80\ 000 =$$



× and ÷

Reveal answer

Use a written method to solve this calculation:

$$68 \times 16 =$$



Fractions

Reveal answer

Add these fractions:

$$\frac{3}{5} - \frac{1}{10} =$$



Problem Solving

Reveal answer

There are 200 beads in a bag. 25% are blue. Half of the rest are red. How many red beads are there?



Reasoning

A 250ml bottle of lemonade fills 2 glasses, so a litre will fill 8 glasses.

Is Jamil correct?

Explain your reasoning.



Friday-

+ and -

Reveal answer

$$7000 + 30 =$$



Reveal answer

$$4050 - 400 =$$



Reveal answer

× and ÷

Reveal answer

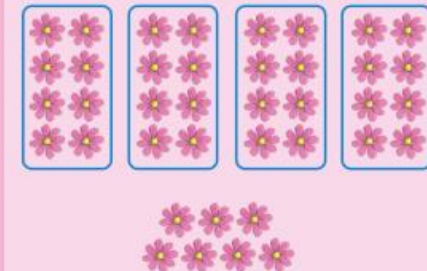
$$3 \times 6 \times 7 =$$



Reveal answer

$$39 \div 8 =$$

Reveal answer



Place Value

Reveal answer

What are the next three numbers in this sequence?

75

100

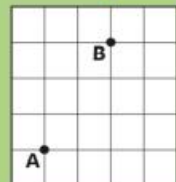
125



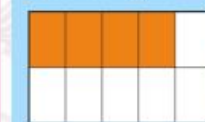
Problem Solving

Reveal answer

Describe the translation from point A to point B.



Reasoning



I need to colour in three more parts to show $\frac{9}{10}$.

Is Jamil correct?

Explain your reasoning.



Science/DT Weekly project

Using your knowledge of how sound travels (if unsure check here <https://www.youtube.com/watch?v=3yqB2KFwJCo>), create the longest cup telephone you can. You only need 2 plastic cups and a length of string to construct these. Be careful when using scissors! How long can you make your phone with it still working? What changes as the string gets longer?

Additional learning resources parents may wish to engage with

- [CODE Maths Hub Daily Fluency Activities](https://www.code-maths.com/) -
- <https://www.topmarks.co.uk/maths-games/daily10> - arithmetic challenges
- [BBC Bitesize](https://www.bbc.com/learning-a-z) - 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.

YR5 answers

Place Value Write one hundred and four thousand and forty-nine in numerals: <div>104 049</div>	Fractions What number is hidden in these equivalent fractions? $\frac{1}{8} = \frac{3}{24}$
+ and - $43\ 100 + 1900 = 45\ 000$ $80\ 200 - 300 = 79\ 900$	Problem Solving Write all the factor pairs of 24. 1 and 24 2 and 12 3 and 8 4 and 6
× and ÷ Use a written method to solve this calculation: $9333 \times 8 = 74\ 664$	Reasoning Four cubed is also eight squared, five cubed will be ten squared. Is Jamil correct? Explain your reasoning.

YR4 answers

+ and - $2800 + 400 = 3200$ $6030 - 700 = 5330$	Place Value Write four thousand and thirty-six in numbers. <div>4036</div>
× and ÷ $3 \times 4 \times 7 = 84$ $37 \div 4 = 9 \text{ remainder } 1$ 	Problem Solving Alison buys a book for £3.75 and pays with a £5 note. With which coins could she receive her change? <div>£1, 20p, 5p or any combination with a total of £1.25</div>
Reasoning Is my part-whole model correct? Is Jamil correct? Explain your reasoning.	

Place Value

Round 76 500 to the nearest thousand.



77 000

+ and -

$$16\,400 + 4\,000 = 20\,400$$

$$45\,000 - 900 = 44\,100$$

× and ÷

Use a written method to solve this calculation:

$$3887 \times 6 = 23\,322$$

Fractions

Convert this mixed number into an improper fraction:

$$4\frac{3}{5} = \frac{23}{5}$$

Problem Solving

Complete this calculation:

$$3 \times 15 = 60 - 15$$

Reasoning



This pentagon is regular because all the sides are the same length.

Is Jamil correct?

Explain your reasoning.



+ and -

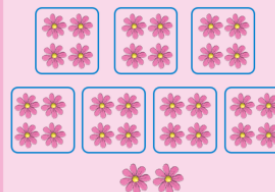
$$35 + 66 = 101$$

$$500 - 201 = 299$$

× and ÷

$$9 \times 5 \times 8 = 360$$

$$30 \div 4 = 7 \text{ remainder } 2$$



Place Value

Put these numbers in order from smallest to greatest:

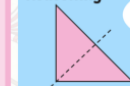
6128 6182 6218 6281

Problem Solving

Find three different ways to complete this part whole model.



Reasoning



I have drawn a line of symmetry on this triangle.

Is Jamil correct?

Explain your reasoning.



Place Value

Which symbol completes this number sentence?

$$63\,036 > 63\,006$$

+ and -

$$276\,000 + 24\,000 = 300\,000$$

$$672\,000 - 80\,000 = 592\,000$$

× and ÷

Use a written method to solve this calculation:

$$68 \times 16 = 1088$$

Fractions

Add these fractions:

$$\frac{3}{5} - \frac{1}{10} = \frac{5}{10} \text{ or } \frac{1}{2}$$

Problem Solving

There are 200 beads in a bag. 25% are blue. Half of the rest are red. How many red beads are there?



75

Reasoning

A 250ml bottle of lemonade fills 2 glasses, so a litre will fill 8 glasses.

Is Jamil correct?

Explain your reasoning.



+ and -

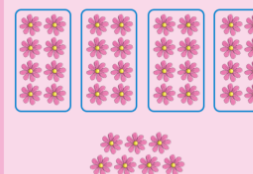
$$7000 + 30 = 7030$$

$$4050 - 400 = 3650$$

× and ÷

$$3 \times 6 \times 7 = 126$$

$$39 \div 8 = 4 \text{ remainder } 7$$



Place Value

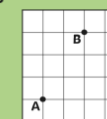
What are the next three numbers in this sequence?

75 100 125 150 175 200

Problem Solving

Describe the translation from point A to point B.

2 right and 3 up



Reasoning



I need to colour in three more parts to show $\frac{9}{10}$.

Is Jamil correct?

Explain your reasoning.

