


Year 6 - Home Learning Project - Week 4: Infinity and Beyond (2)

Daily activities:

English worksheet and tasks	Maths:	Reading Plus:	TTRS and Numbots	PE session	A Topic activity from the choices below.
Re-read 'The Girl Who Stole an Elephant' and complete the tasks below.	Complete the White Rose Maths tasks at the end of this document - 1 per day. Ensure you watch the video before you complete the task.	Log into Reading Plus and complete your weekly reading comprehension tasks and vocabulary tasks. Site code: rpendea2	Working on Times Table Rockstars - Can you complete all the set games and challenge somebody in our school? Are you winning in the current Battle of the Bands?	Join Joe Wickes live every morning @ 9:00am or access it any time throughout the day.	Try to complete all of the tasks and send your work to your teacher.

This week's themed learning is based around our new topic of **Space - Infinity and Beyond**

<u>Music</u>	<u>Geography</u>	<u>History</u>	<u>Computing</u>
<p>Gustav Holst was a British composer best known for his orchestral suite 'The Planets'.</p> <p>A suite is a group of individual pieces. There are seven pieces in 'The Planets' and 'Mars, the bringer of war' is the first one.</p> <p>Listen to the music and make a creative response based on what you hear.</p> <p>You can find more about the music here: https://www.bbc.co.uk/programmes/articles/14ZjT5yjnKQRdKVsqRLzk1x/mars-from-the-planets-by-gustav-holst</p> <p>Your creative response could be:</p> <ul style="list-style-type: none"> • A piece of art work. • A dance routine. • Lyrics to accompany the music. • A body percussion routine. • A piece of poetry. 	<p>Using Digimap or Google Maps identify the countries where the Spaceports of the World can be found.</p> <p>Use Nasa's website to find the location of the international space station live here</p> <p>Can you describe the position using longitude and latitude?</p> <p>Write a brief explanation of what longitude and latitude mean.</p>	<p>Look at the chronological timeline of space exploration and answer the following questions:</p> <ol style="list-style-type: none"> 1) Which event do you consider to be the most significant and why? 2) Can you add two other dates to the timeline, which were significant to space exploration. Explain why you have chosen them. 3) Research the future plans for space exploration. How do they compare to historical space exploration? 	<p>Log on to Purple Mash and use your coding and maths skills to launch a rocket successfully. Rockets has been set as a 2Do</p> <div align="center">  <p>Rockets</p> </div>

Science Investigation: Big Question (Who should own space?)


Consider the following questions:

- Should one country own all of space?
- What is valuable in space?
- Should it be finders, keepers?
- If humans lived on Mars, should it be split up into countries?

Debate the question and record your findings as a written debate. Use evidence from your research to support your debate and conclude your investigation.

Who should own space?



<u>DT: Problem Solvers</u>	<u>English: Vocabulary</u>	<u>English: Writing</u>	<u>British Values/Global Learning</u>
<p>Sometimes you have to solve a problem on the spot. Can you design a space suit which is suitable for a future space mission?</p> <p>As you follow the design process, consider these prompts...</p> <ul style="list-style-type: none"> • What do humans need to survive? • What difficulties might there be in space? • What materials would you use and why?  <p>Research current space suits to support your design ideas but remember to be innovative and create a unique design.</p> <p>Present your design as an annotated diagram and explain reasons for chosen materials underneath your design.</p>	<p>Using Collins online dictionary, can you define the following words?</p> <ul style="list-style-type: none"> • Galaxy • Universe • Meteor • Comet • Asteroid • Vacuum • Orbit • Satellite <p>Access BBC Bitesize and watch the videos on The Solar System. https://www.bbc.co.uk/bitesize/articles/zk7fy9g Then complete the solar system vocabulary task below.</p>	<p>Create a non-fiction biography on the famous scientist Professor Brian Cox to understand his influence to science.</p> <p>You could use the following headings:</p> <ul style="list-style-type: none"> • Introduction (including full name, date of birth and profession) • Early life • Career • Achievements • Conclusion (including how they have influenced science over the year) 	<p>Debate - Should we keep spending money towards Space Travel?</p> <p>Why?</p> <p>Discuss with your family and write a list of reasons for and against.</p> <p>Can you come to a conclusion and justify your response?</p>

Website links mentioned above:

<https://digimapforschools.edina.ac.uk/login> Digimap to identify countries **Login - Username: SK145PL Password: jarves84**

<https://www.google.co.uk/maps/> Google maps to identify countries

<https://aerospace.csis.org/data/spaceports-of-the-world/> Interactive map of the Spaceports of the world.

<https://www.collinsdictionary.com/> Online dictionary and thesaurus

<u>Topical Knowledge:</u>	
<u>Timeline:</u>	
1942 – Nazi Germany launched long-distance rockets as weapons.	
1957 - Soviets launched the first artificial satellite – Sputnik 1 into space.	
1961 – Russian Yuri Gagarin became the first human to orbit Earth	
1961 – Alan Shepard became the first American to fly into space.	
1969 – Neil Armstrong became the first astronaut to walk on the moon.	
1971 – Russia launched the first space station called Salyut 1.	
1973 – USA launched its first space station called Skylab.	
1975 – The first multinational manned space mission. Ending the Space Race between Russia and USA.	
1976 – Viking 1 successfully landed on Mars.	
1981 - USA launched the first Space Shuttle, Columbia.	
1983 – Sally Ride became the first American woman in space.	
1986 – The Mir became the first consistently inhabited space station. It remained in orbit until 2001.	
1998 – The International Space Station was launched into space.	
2001 – The NEAR Shoemaker made the first landing on an asteroid.	

World Map - Spaceports of the World - Identify the countries where you can find Spaceports



The Solar System Vocabulary

Mercury	Mars	Uranus	Planet
Venus	Earth	Jupiter	Neptune
Sun	Saturn	Kuiper belt	Star

Use the words above to complete the sentences.

_____ is red and is the fourth planet from the Sun.

_____ is blue and is the eighth planet from the Sun.

The _____ is a ring-shaped disc made up of asteroids and dwarf planets.

_____ is the largest planet in the Solar System.

_____ is the second planet from the Sun.

_____ has 27 moons and is the seventh planet from the Sun.

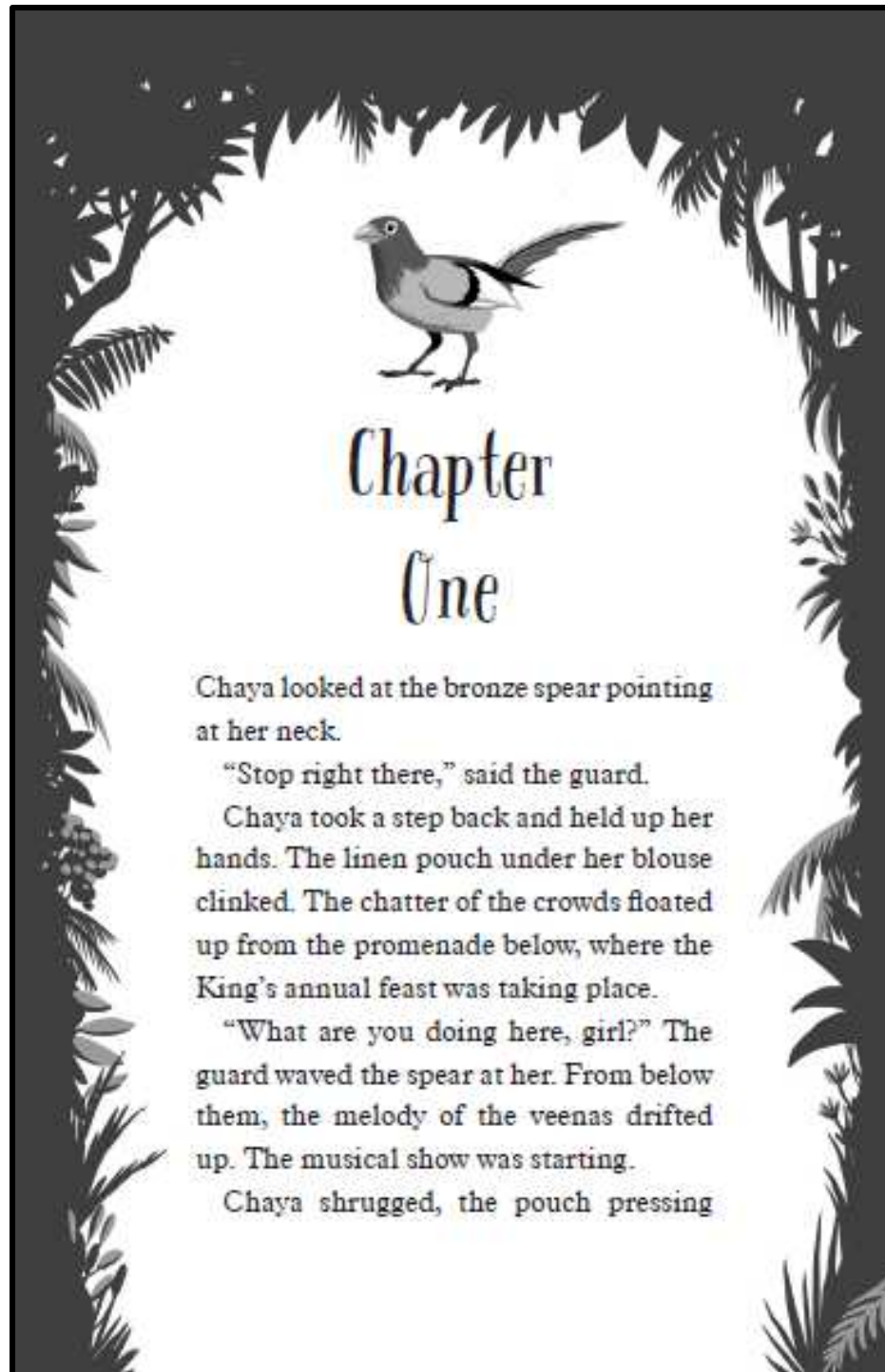
_____ has many rings is the sixth planet from the Sun.

_____ is covered by land and water. It is our home planet.

_____ is very hot and is the planet that is closest to the Sun.



Re-read the chapter below then complete the tasks. Remember to send your work to Miss Harris on Teams so she can give you feedback.



Chaya looked at the bronze spear pointing at her neck.

“Stop right there,” said the guard.

Chaya took a step back and held up her hands. The linen pouch under her blouse clinked. The chatter of the crowds floated up from the promenade below, where the King’s annual feast was taking place.

“What are you doing here, girl?” The guard waved the spear at her. From below them, the melody of the veenas drifted up. The musical show was starting.

Chaya shrugged, the pouch pressing

against her chest. She rubbed her palms down her skirt and tried to keep her voice level. “I’m just looking around.”

Her voice brought two more guards to the top of the stone steps cut into the hill. This was how the royal palace was built – a network of buildings at the top of the mountain, every rock and ledge forming courtyards and pools for the royal household while they ruled from above.

“You’re not allowed here,” the guard said to Chaya. “You should be down below, enjoying the food and the festivities.”

Not Chaya. She much preferred breaking into the Queen’s rooms and stealing her jewels. There was a particularly nice blue sapphire in her pouch at that moment.

“Well?” The man jabbed his spear towards her. “What have you got to say for yourself?”

“I wanted to get a little closer to the palace. See what it’s like. It looks so pretty from down there.” She pointed in the direction of her village and made her face go all wistful.

The guard sighed. “Fine. Just make sure you don’t do it again.” He put his spear down. “Anything past the lion’s entrance is strictly out of bounds

to the public.”

Chaya looked back and nodded meekly, as if noticing the giant lion statue for the first time, even though it could be seen from villages miles away. The stone stairway carved between the crouching lion’s paws led into the complex of buildings that made up the inner palace.

“Come on now.” The guard gripped her arm, making her wince. He pulled her to the cobbled walkway sloping downwards towards the celebrations below. “I don’t want to see you here again.”

The Queen’s jewels jangled in her pouch. There were sapphires, tourmalines and star rubies, set in heavy, shiny gold. How many jewels did one person need anyway? And these were just the ones from the drawer in the rosewood table by the bed. Pity she’d had to leave so quickly when she heard voices outside the door. And then to be seen when she was halfway down to the promenade was just bad luck.

She shrugged herself free of the guard and set off, her arm stinging from where his fingers had pinched her.

In spite of everything Chaya found herself gasping at the view from up there. The kingdom of Serendib spread out around her as far as the eye could see, thick

green forests and strips of silver rivers, with the King's City below and clusters of little villages beyond.

But she wasn't ready to leave yet. Chaya paused near a tamarind tree and pretended to look up at the monkeys on it. Dappled sunshine prickled her face as she looked at the guard out of the corner of her eye.

He had stopped walking but was still watching her. She heard him swear loudly. "What are you doing now? Get out, girl, before I come and give you a thrashing."

The sensible thing to do was to get out of there as fast as she could. But the Queen's rooms were calling out to her. It was as if she could hear their whisper, right there in the warm sun. The softness of the velvet rugs, the gauzy bed curtains dancing in the breeze, and the promise of more riches within the ebony and teak cabinets.

Suddenly a commotion came from above her, near the Queen's quarters. She heard shouting and the sound of people running.

Chaya thought back quickly. Had she forgotten to close the drawer in her rush?

She sneaked a quick look over her shoulder to see a figure running down the cobbled path behind her.

It really was time to get out.

Chaya carried on walking as casually as she could. Her heart hammered at the sounds behind her.

She was just passing under the stone lion when she heard a yell.

"Hey, you!"

Chaya sped up, her bare feet scorched by the cobbles.

"Hey! I need to talk to you, girl."

She had to get away fast or everything would be over. Her feet slapped harder on the path and her breath came out in puffs.

There was a scuffle of hurrying feet behind her.

Chaya hitched up her skirt and raced down the path. The sound of thundering feet chased her; heavy sandals pounding on cobbles.

She pulled up with a jolt when she saw a row of guards racing towards her from below. She turned and ran blindly sideways, springing up some steps into the Queen's prayer hall and threading through its granite columns. Spears clattered against columns as the guards tramped after her. She got to the far side of the hall and plunged down into the foliage, thrashing through it and down the steps into the formal gardens.

She found herself close to the promenade where the

feast was taking place. The smell of frying sweetmeats meant the food tables were just round the corner.

Chaya skidded to a halt in front of two boys stuffing rice cakes down their shirts. They looked up in alarm at her sudden arrival, and took off in different directions.

Leaping away from them she pitched into a crowd of dancers and musicians. The revellers were oblivious to the unfolding drama, and cymbals clashed and bare-torsoed dancers jumped and twirled to the beat of drums. She ran through the band, clapping her hands over her ears to escape the shrill sounds of the swaying flutes.

"Stop her!" came a shout. "*Stop her!*" The dancers paused, one by one, and some of the music petered out. People gawped, looking behind Chaya towards the guards chasing her. "*The girl! Stop the girl!*"

A man in the crowd lunged at Chaya but she slipped out of his grasp and ran towards the gates of the royal complex. Coconut-flower decorations tied along strings came crashing down as she ran through them, wrapping themselves around her like a trap. She tore them off and kept running.

Elephants from the temple stood on the lawn ahead of her, draped in their mirror-studded regalia, ready

She'd lost them.

Chaya shimmied up the tree, hands scratching against the rough bark. She settled herself in one of the high branches and picked out the coconut blossoms stuck in her hair. Lifting her linen pouch over her neck, she dropped the jewels into her lap. They sparkled in shards of bright blue, green and pink against the grey of her skirt.

It had been a huge risk. Her boldest robbery to date. And yet she'd pulled it off.

She picked a *jambu* fruit from a branch nearby and crunched into its juicy pink flesh, peering through the leaves at the royal compound in the distance.

It was pandemonium down there. The crowds were scattered and panicked, clusters of people moving in different directions. The King, standing out in his gold-encrusted waistcoat, had come down from the dais and was roaring at his staff. The Queen and her procession of ladies were being guided out of the promenade up to the palace. The mahouts on the green were trying desperately to calm their confused charges and stop them running amok. In the middle of it all, Ananda lifted up his majestic head and trumpeted loudly into the blue, blue sky.

Reading

Underline 3 words you are not sure of. Find the meaning of these words. Can you use them in a sentence of your own?

On page 2:

1. What was Chaya doing? (Write full 1-2 sentences)
2. Who stopped her? (Write 1 full sentence)

On page 3:

1. Meekly is closest in meaning to:
a) confidently b) shyly c) loudly d) lovely
2. What was the statue of? What 2-3 things do we learn about it?
3. Why is Chaya at the palace? What reason does she give to the guard? What is the *real* reason?

Writing

You made it home safe! Write a diary entry about escaping with the jewels as if you are Chaya.

- Write as if you are Chaya
- Around 15-20 lines
- Describe your conversation with the guard
- Describe what you had in your pouch and how you feel about it

Grammar

Insert a semi-colon in the correct place in this sentence.

Frank would like to go to Cornwall next summer he might also visit France in the spring.

Circle the modal verb in this sentence.

Kate hoped that she would see goats and sheep at the farm.

Circle each word that should begin with a capital letter in this sentence.

when we visited the museum in birmingham, gareth arranged to travel by train with aunt laura.

Insert an apostrophe in the correct place in this sentence.

Pupils coats should be hung on the pegs.

Complete this sentence using the subordinate conjunction when.

You can go out to play _____

Spelling

Practise each word. Choose two and write their definitions.

Choose two to write in sentences.

available

average

awkward

bargain

bruise

category

cemetery

committee

communicate

community

competition

conscience

Below are some suggested timings for each lesson:

Reading: 30 minutes (this includes time to re-read, look up unknown words and ask questions)

Writing - 45 minutes

Grammar - 5 minutes

Spelling - 10 minutes

How parents, carers or siblings can help:

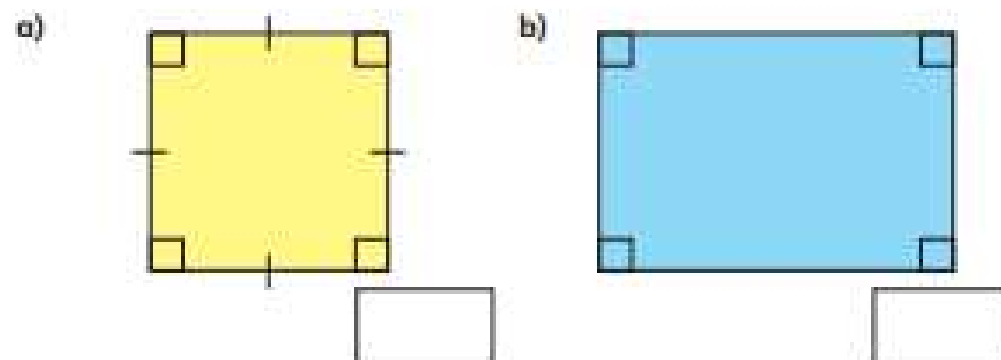
- Read the extract aloud with you.
- Gather all the exciting and difficult words you want to find out about or use in your writing and put them on display to support your amazing writing.
- Help with ideas for planning your writing.
- Write a story at the same time as you. You could then compare your stories and give each other feedback. **(Remember: Be Kind, Be Specific, Be Helpful)**

Please watch the video first: <https://whiterosemaths.com/homelearning/year-6/>

Angles in special quadrilaterals

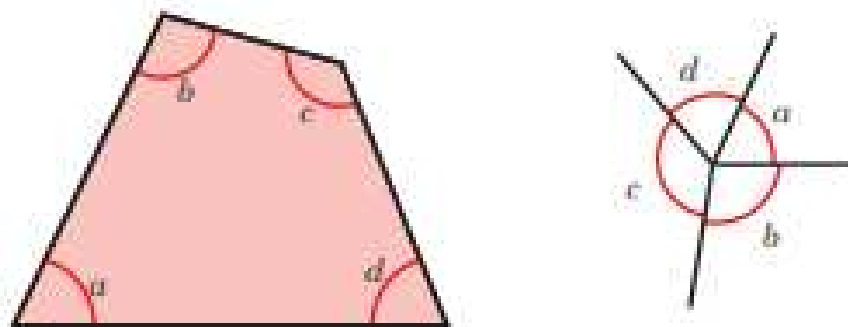
White
Rose
Maths

1 Work out the sum of the angles in each shape.



What do you notice?

2 The diagrams show the four vertices of a quadrilateral arranged around a point.

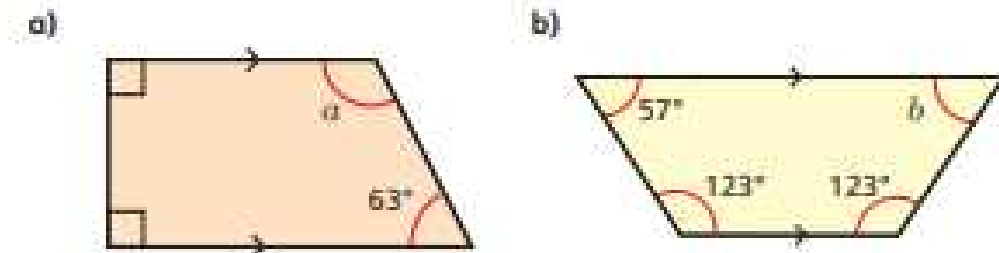


What do the diagrams illustrate about the sum of the angles in a quadrilateral?

Complete the sentence.

Angles in a quadrilateral _____

3 Work out the size of the unknown angle in each trapezium.

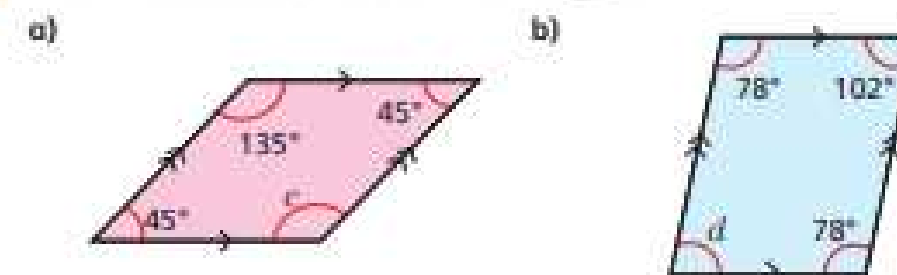


$a =$

$b =$

c) What is the same and what is different about the trapeziums?

4 Work out the sizes of the unknown angles.



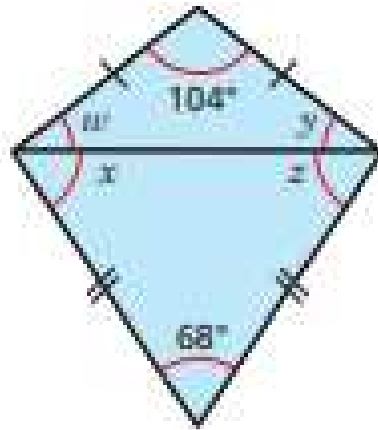
$c =$

$d =$

c) What do you notice about opposite angles in a parallelogram?

5 Two isosceles triangles are joined to form a kite.

a) Work out the sizes of the unknown angles.



$w =$ $y =$ $x =$ $z =$

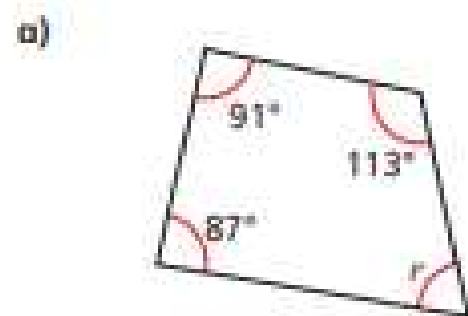
b) Work out $w + x$.

c) Work out $y + z$.

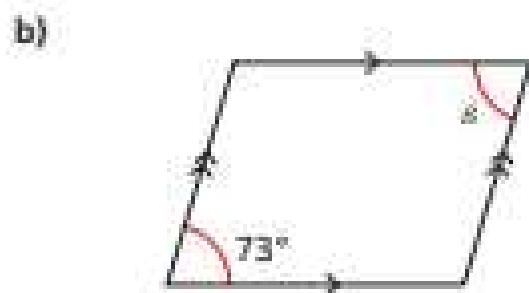
What do you notice? Talk about it with a partner.



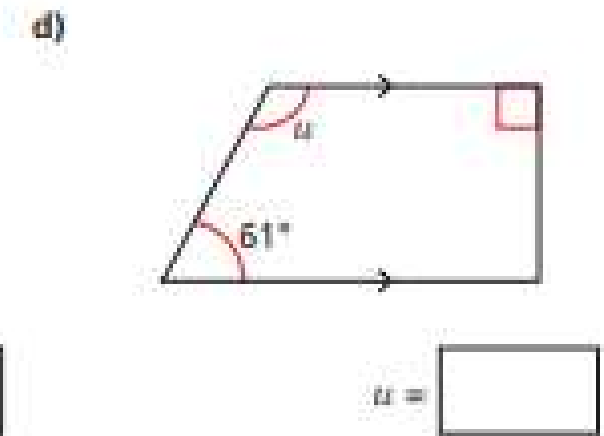
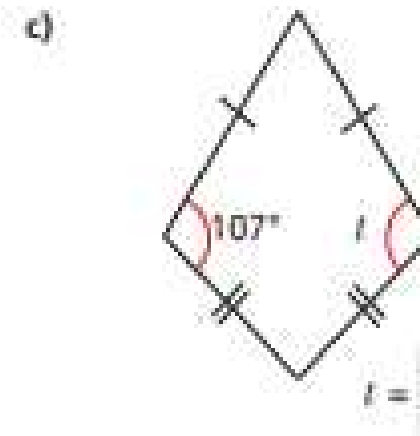
6 Work out the sizes of the unknown angles.



$r =$



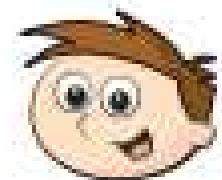
$s =$



Compare your reasoning with a partner.

7 Teddy is drawing a quadrilateral.

My quadrilateral has exactly three right-angles.



Is Teddy's quadrilateral possible? _____

Explain your answer.

Please watch the video first: <https://whiterosemaths.com/homelearning/year-6/>

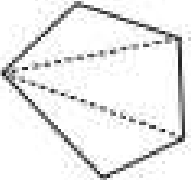
Angles in regular polygons



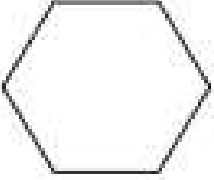
1 The sum of the interior angles of a triangle is 180° .

Split the polygons into triangles to work out the sum of their interior angles. Your lines should not overlap.

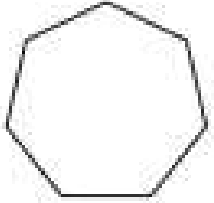
The first one has been done for you.

a)  number of sides =
 number of triangles =
 $3 \times 180 =$

The sum of the interior angles of a pentagon is

b)  number of sides =
 number of triangles =
 $\times 180 =$

The sum of the interior angles of a hexagon is

c)  number of sides =
 number of triangles =
 $\times 180 =$

The sum of the interior angles of a heptagon is

What do you notice about the number of sides compared to the number of triangles?



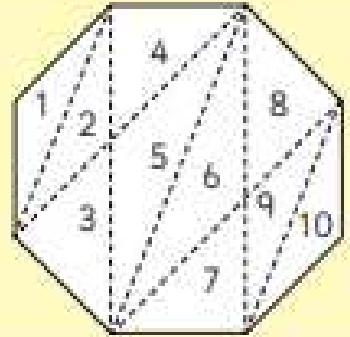
2 Complete the table.

Shape	Number of sides	Number of triangles	Sum of interior angles
quadrilateral	4	2	360°
pentagon			
nonagon			
decagon			
	6		
		6	
			$1,800^\circ$

Compare answers with a partner.

3 Dani is working out the sum of the interior angles of a polygon.

Here are her workings.



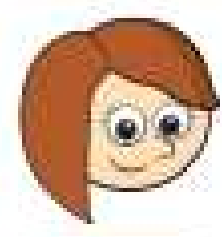
$10 \times 180 = 1,800^\circ$

Do you agree with Dani? _____

Explain your answer.

4 Rosie, Amir and Eva are drawing polygons.

a)



Rosie

I have split my polygon into four triangles.

What polygon has Rosie drawn? _____

b)

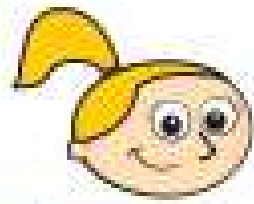
The sum of the interior angles of my polygon is $1,080^\circ$.



Amir

What polygon has Amir drawn? _____

c)



Eva

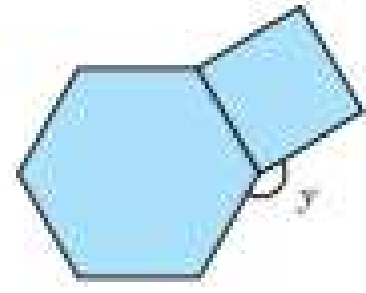
My polygon has more sides than Rosie's but fewer than Amir's.

What is the sum of the interior angles of Eva's polygon?

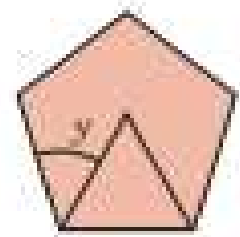


5 Each compound shape is made up of regular polygons. Work out angle y in each case.

a)

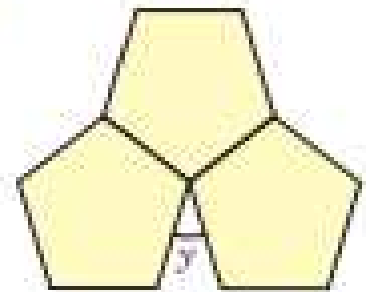


d)

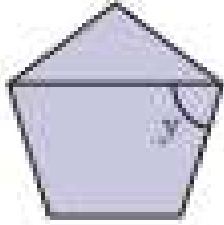


$y =$

b)

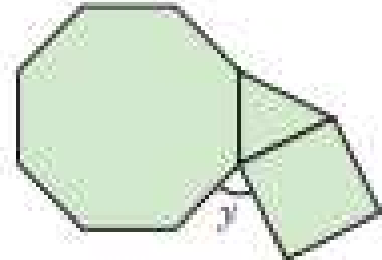


e)

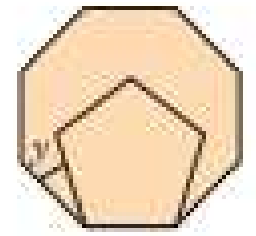


$y =$

c)



f)



$y =$

$y =$

Problem Solving



Your turn

1 A car park is full.

- $\frac{1}{3}$ of the cars leave
- 60% of the remaining cars are red.

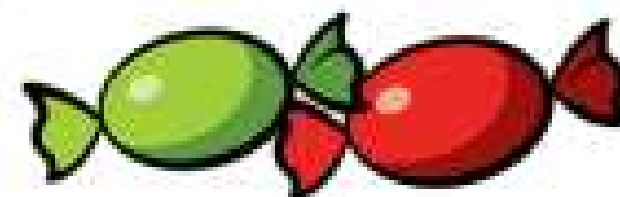


There are 174 red cars.

How many cars left the car park?

2 Mo has some red and green sweets.

- He eats $\frac{1}{3}$ of the sweets.
- $\frac{3}{4}$ of the sweets left over are green.



- Mo buys himself 30 more green sweets.

There are now 162 green sweets.

How many sweets did Mo start with?

Problem Solving



Your turn

3 Eva has £6.05 in a moneybox.
She only has 20p, 10p and 5p coins.
For every two 10p coins in the box,
Eva has one 20p coin and three 5p
coins.

How many of each coin does Eva
have in her moneybox?

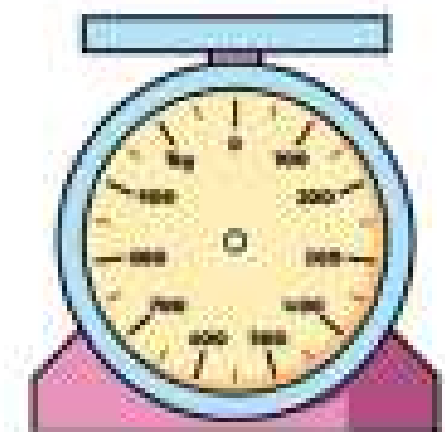


4 Dexter has to make the scales read
between 250 g and 300 g.
He only has 10 g, 25 g and 50 g
weights.

He has to use at least one of each
weight.

For every three 10 g weights on
the scales, Dexter uses one 25 g
weight.

What combinations
could he use?



Problem Solving



Your turn

1 A rectangle is cut into two pieces.



The area of B is $\frac{2}{7}$ of the area of the rectangle.

The area of A is 36 cm^2 greater than the area of B.

What is the length of the rectangle?

2



The area of B is 40% of the area of the rectangle.

A is cut in half to make shape C and D.

The area of B is 8 cm^2 greater than the area of C and D.

What is the area of the whole rectangle?

Problem Solving



Your turn

3 Tommy is getting a taxi home.

The taxi company charges at the following rate.

Taxi Fares	
First 5 mins	£3.80
Next 5 mins	£3.10
Every following minute	40p

The taxi leaves school at 3.47 p.m.

It arrives at Tommy's home at 16.04

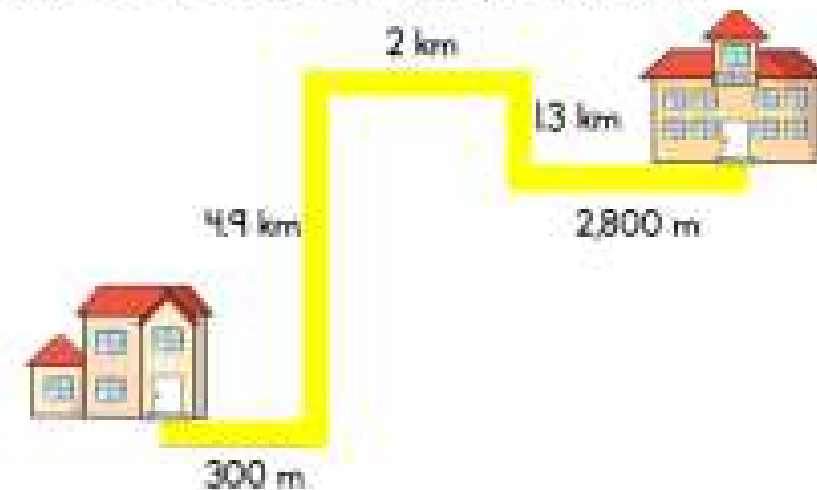
How much does the fare cost?

4 Eva is getting a taxi home.

The taxi company charges at the following rate.

Taxi Fares	
First 3 km	£3.80
Next 5 km	£3.10
Every following km	40p

This is her journey home.



How much does the fare cost?

Head to: <https://whiterosemaths.com/homelearning/year-6/> and complete the Friday Maths Challenge!

