YEAR 6

HOME LEARNING

Oldbury Park PRIMARY RSA ACADEMY

Hello, Year 6!
Believe it or not, this week would have been SATs week! You have all worked exceptionally hard this year in preparation for this important week. We know that many of you were looking forward to this week to prove to yourselves what you are capable of. Although it would have been a challenging week, we would also have made it full of fun activities.
In the spirit of Year 6 tradition, we are going to put your knowledge and skills to the test with our specially made (and slightly funny) SATs papers!
You can take part in Breakfast club by having a piece of toast…unfortunately not made by Julie, to start your day!
After all the hard work you will be putting in, you may also want to treat yourselves with some sweets or cakes, as this is something we would have done after a test.
This would have been a hard week for you all but one that you would remember for a long time!
Best of luck for this week – let us know how you're getting on by sharing your activities on Twitter!
Miss Moule Miss Hill Julie

EVERY DAY
Daily Maths lessons - https://whiterosemaths.com/homelearning/year-6/ (Summer term Week 2 w/c 27th April) We are a little behind the WR maths schemes.
Watch the video and then complete the written task (some may need printing). This is 30-40 minutes work. **This week is angles in quadrilaterals, polygons and problem solving.**

Mathletics – 15-20 minutes (more if you wish).
Read for at least 30 minutes.

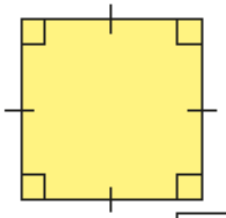
Here is your timetable for the week

Monday	TOAST TIME!	White Rose Maths Day 1 – Angles in special quadrilaterals.	Silly Grammar Test! Silly Spelling Test!	Meditation After your first day of SATs, you may want to unwind. Find a quiet place, possibly outside. Close your eyes and listen to what is around you. Think about what you can hear or feel. You may want to do some positive self-talk or reflect on your time at home. Enjoy this time to relax and be mindful. Think about what you are grateful for or what you would like to do to become even better.
Tuesday		White Rose Maths Day 2 – Angles regular polygons.	Silly Reading Test!	Board games – choose some of your favourite board games or quiz games. Play with your family and enjoy spending some fun time together! You could always play a game with your friend online!
Wednesday		White Rose Maths Day 3 – Problem Solving	Test your arithmetic! https://www.twinkl.co.uk/resource/usk2-pirate-themed-mental-calculations-code-breaker-differentiated-activity-sheets-t2-m-2545910	Get outside! Do some exercise, play a game, create a dance, explore nature, take part in a fitness video or do some yoga!
Thursday		White Rose Maths Day 4 – Problem Solving	Silly Reasoning Test!	Design a quiz. You could write questions for a number of different rounds. Some ideas include a Film and TV round, a Geography round or perhaps Sports and Leisure. Have your family take part in your quiz during the evening. There could be a prize for the person who scores the most points!
Friday		White Rose Maths Day 5 – Friday Maths Challenge. For an extra maths challenge, complete challenges 7–10.	Arrange an end of SATs virtual garden party with your friends or family! In the morning, design and create some invitations. These could be handwritten or made on the computer to email to your friends. Create some decorations or props for your party – you could organise a theme within your group! Bunting and paper chains are a great idea! Talk about all the incredible things you've been up to and celebrate your success! Use Facetime or Whatsapp to include as many of your friends as you can!	

Angles in special quadrilaterals

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

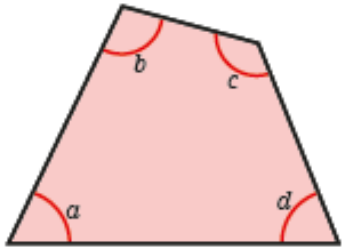
a)

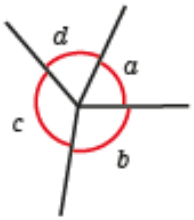


b)

What do you notice?

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





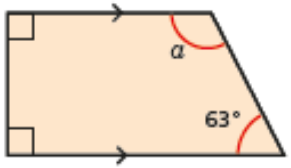
What do the diagrams illustrate about the sum of the angles in a quadrilateral?

Complete the sentence.

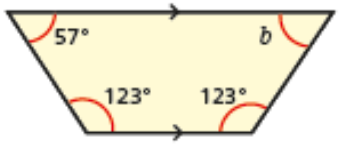
Angles in a quadrilateral _____

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

a)



b)

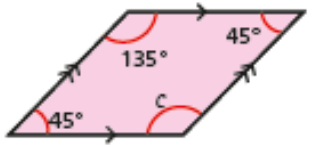


$a =$ ☐ $b =$ ☐

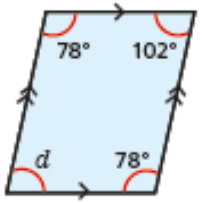
c) What is the same and what is different about the trapeziums?

4 Work out the sizes of the unknown angles.

a)



b)



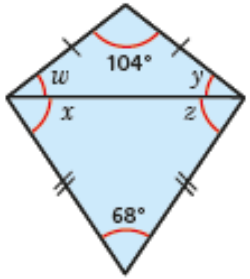
$c =$ ☐ $d =$ ☐

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 $w + x$.

☐

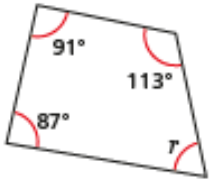
c) Work out $y + z$.

☐

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

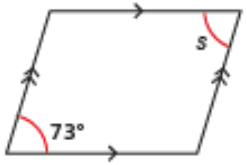
6 Work out the sizes of the unknown angles.

a)



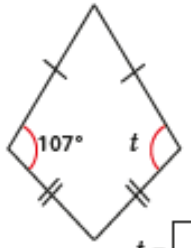
r = ☐

b)



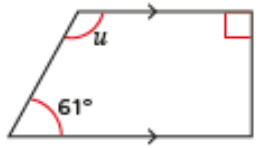
s = ☐

c)



t = ☐

d)



u = ☐

Compare your reasoning with a partner.

7 Teddy is drawing a quadrilateral.

Is Teddy's quadrilateral possible? _____

Explain your answer.

_____

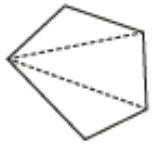
_____

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 = 5

number of triangles = 3

3 × 180 = 540

The sum of the interior angles of a pentagon is 540°

b) 

number of sides = ☐

number of triangles = ☐

☐ × 180 = ☐

The sum of the interior angles of a hexagon is ☐

c) 

number of sides = ☐

number of triangles = ☐

☐ × 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?

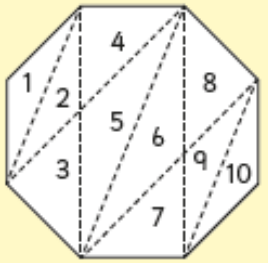
2 Complete the table.

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

Compare answers with a partner.

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

Here are her workings.



10 × 180 = 1,800°

Do you agree with Dani? _____

Explain your answer.

4 Rosie, Amir and Eva are drawing polygons.

a)

I have split my polygon into four triangles.

Rosie

What polygon has Rosie drawn? _____

b)

The sum of the interior angles of my polygon is 1,080°.

Amir

What polygon has Amir drawn?

_____

c)

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

Eva

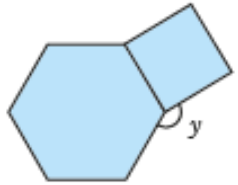
What is the sum of the interior angles of Eva's polygon?

□

5 Each compound shape is made up of regular polygons.

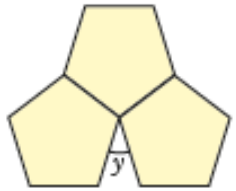
Work out angle y in each case.

a)



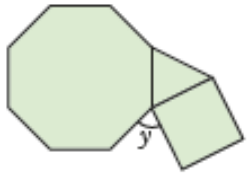
$y =$ □

b)



$y =$ □

c)



$y =$ □

d)

$y =$ □

e)

$y =$ □

f)

$y =$ □

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?

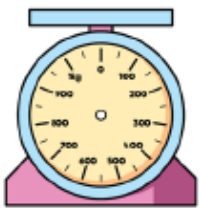
4 Dexter has to make the scales read between 250 g and 300 g.

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 cm² 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 cm² 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

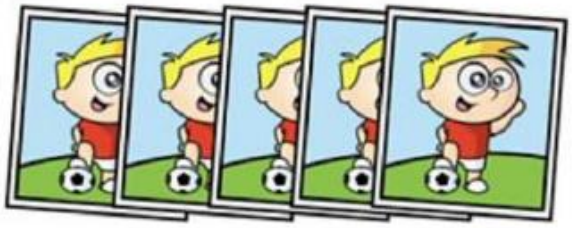
This is her journey home.

How much does the fare cost?

Challenge 3

Stickers come in packs of 5.

Max buys 12 packs.



He gave his three friends some stickers.

They each receive the same number.

He has 27 stickers left.

How many stickers did Max give each of his friends?

Challenge 4

Here are 3 containers.

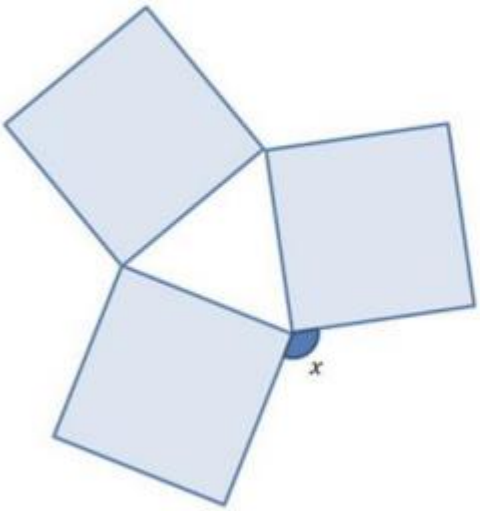
- The jug can hold **1500 ml**.
- The bucket can hold **2 litres**.
- The barrel can hold **15 litres**.

Anisa wants to fill the barrel with water.

Find 2 ways that Anisa can fill the barrel using the jug and bucket.

Challenge 5

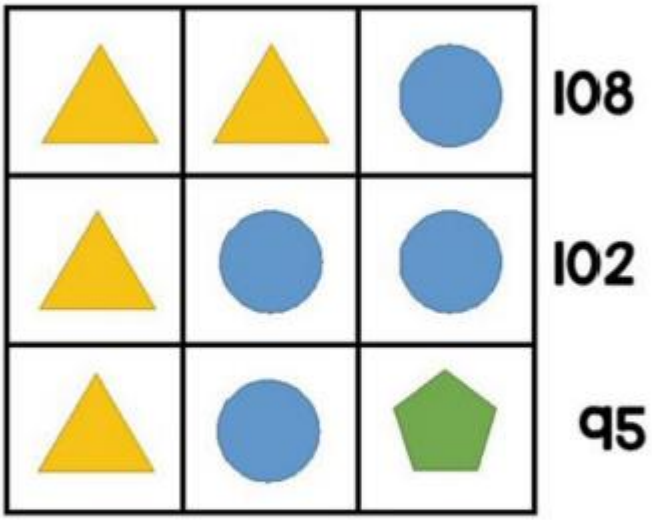
Three identical squares are arrange to make this pattern.



What is the size of the angle marked *x*?

Challenge 6

Here is a 3 x 3 grid with some shapes in.



Each shape represents a number.

The sum of each row is shown at the right of the table.

Find the value of each of the shapes.

Challenge 7

Megan puts 4 fractions in order, starting with the smallest.

$\frac{1}{2}$ $\frac{}{8}$ $\frac{7}{}$ $\frac{}{5}$

She has spilt some paint on some parts of the fractions.

What could the missing numbers be?

Challenge 8

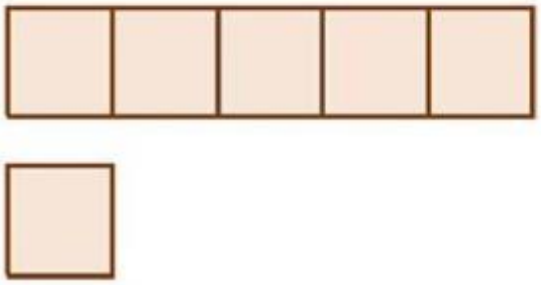
Connor has five times as much money as Jayden.

Connor gives some money to Jayden.

They now have £8.52 each.

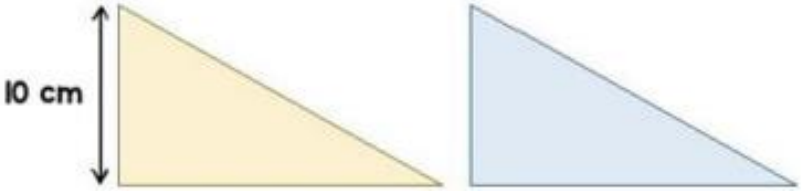
How much did Connor have at the start?

Hint: The diagram below may help you.

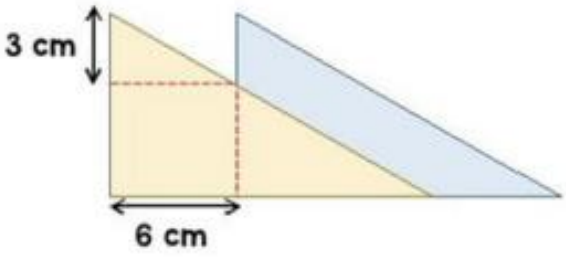


Challenge 9

Here are two triangles identical in size.



The two triangles are overlapped.



What is the area of the blue triangle showing?

Challenge 10

80 people take part in a race.

- The ratio of children to adults in the race is **2:3**.
- The mean time for the adults is **2 minutes 15 seconds**.
- The mean time for all 80 people is **3 minutes**.

Find the mean time for the children.

Pirate-Themed Mental Calculations Code Breaker

Use the code breaker to reveal the pirate-themed words.

Find the words you reveal in the word search.

a	b	c	d	e	f	g	h	i	j	k	l	m
121	642	125	8	12	11	16	22	216	48	49	36	603

n	o	p	q	r	s	t	u	v	w	x	y	z
7044	872	14	42	7704	27	84	100	27	64	120	66	144

	Answer	Letter
64 200 ÷ 100		
10^2		
0.125 × 1000		
5^3		
$\frac{11}{12}$ of 132		
15184 – 8140		
$\frac{3}{7}$ of 28		
$\frac{2}{11}$ of 66		
4052 + 3652		

1400 ÷ 10^2		
6^2		
0.121 × 10^3		
8140 - 1096		
7^2		

3^3		
8053 - 7932		
6^3		
4 × 3^2		

	Answer	Letter
$\frac{7}{12}$ of 24		
11^2		
36 357 - 28 653		
6992 ÷ 712		
25 652 - 24 780		
$\frac{7}{12}$ of 144		

5184 - 5059		
1.21 × 10^2		
$\frac{2}{5}$ of 35		
0.084 × 1000		
11^2		
21600 ÷ 100		
7.044 × 10^3		

5^3		
10^2		
0.84 × 100		
6^2		
$\frac{11}{100}$ of 1100		
3^3		
$\frac{3}{8}$ of 72		

Pirate-Themed Mental Calculations Code Breaker

p	a	r	o	t	f	g	h	i	j	k	l
m	n	p	p	q	r	s	t	u	p	w	x
y	z	a	l	c	c	u	t	l	a	s	s
k	l	b	n	a	p	q	r	s	r	u	v
w	x	y	u	a	n	c	d	e	r	g	h
s	j	k	l	c	n	k	p	q	o	s	t
n	v	w	x	y	c	s	b	c	t	e	f
a	h	i	j	k	l	a	n	o	p	q	r
i	s	u	v	w	x	i	n	a	b	c	d
l	f	a	h	i	j	l	l	e	n	o	p
q	c	a	p	t	a	i	n	y	e	a	b
c	d	e	f	g	h	i	j	k	l	r	n

_____ _____

_____ _____

_____ _____