



W.C. 6th July

<https://www.bbc.co.uk/bitesize/tags/zncsscw/year-6-lessons/1>

<https://whiterosemaths.com/homelearning/year-6/>

Maths

Dear parents/carers, there is no expectation to complete all the work or print worksheets off - children can work on paper if they want to write it down. Thanks for all your hard work.

Also there is work on **StudyLadder** that we know the children love to use. You can email us on s83year6@st-annes.solihull.sch.uk for the password if your child has forgotten their login.

Purple Mash Look out for the activities: Types of angles, estimate angles and angles in triangles.

There is a **Fluent in 5** at the start of Monday to Thursday for the children to practise their arithmetic.

We have also uploaded into the home learning section the **Corbett Maths 5** a day for the whole of July for each level - Bronze, Silver, Gold, Platinum (as well as the answers) and a weekly arithmetic test with answers.



After watching the videos and having a go at the practice activities, have a go at these activities. Depending on your confidence choose Mild, Medium or Spicy.

Extensions - You may wish to deepen your learning by looking at the Collins Worksheets provided by the BBC too.

Monday

<https://www.bbc.co.uk/bitesize/tags/zncsscw/year-6-lessons/1>

<https://whiterosemaths.com/homelearning/year-6/>

Calculate angles, including vertically opposite angles

Fluent in 5

1	$854.34 + \boxed{} = 923.78$	☐ 1 mark

2	$45 \times 32 =$	☐ 2 marks

3	$15\% \text{ of } 80 =$	☐ 1 mark

4

$$\boxed{} \div 1.3 = 4$$

☐

1 mark

5

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

☐

1 mark

6

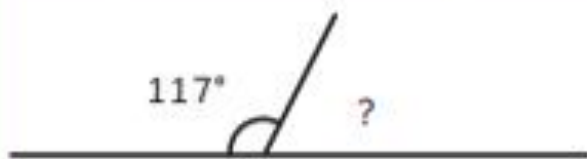
$$800 + 679 =$$

☐

1 mark

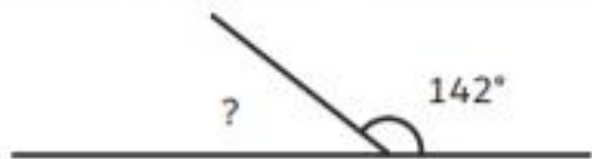
Finding Missing Angles

Angles on a straight line always add up to 180°



$$180^\circ - 117^\circ = 63^\circ$$

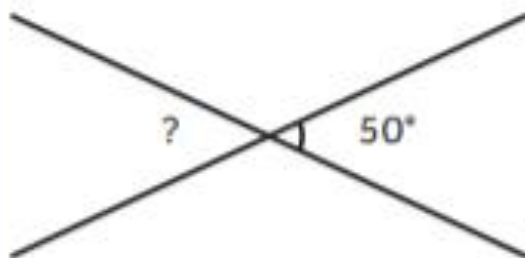
The missing angle is 63° .



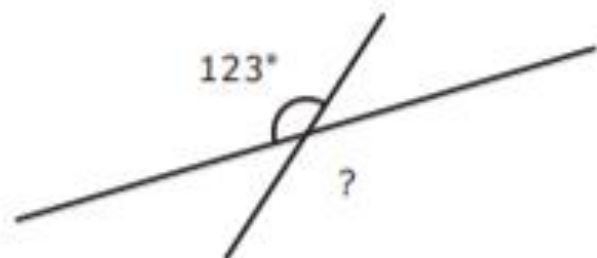
$$180^\circ - 142^\circ = 38^\circ$$

The missing angle is 38° .

Missing Vertically Opposite Angles
Opposite angles are equal.

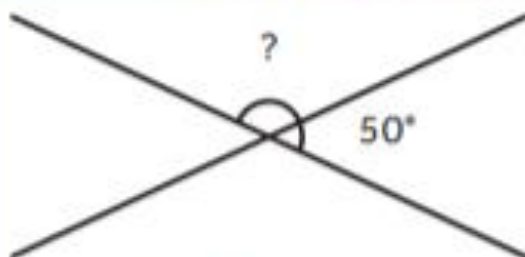


The missing angle is 50° .



The missing angle is 123° .

Angles around a point total 360°

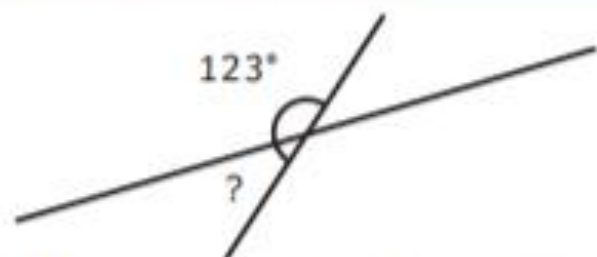


The two known opposite angles total 100° .

$$360^\circ - 100^\circ = 260^\circ$$

$$260^\circ \div 2 = 130^\circ$$

The missing angle is 130° .



The two known opposite angles total 246° .

$$360^\circ - 246^\circ = 114^\circ$$

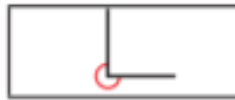
$$114^\circ \div 2 = 57^\circ$$

The missing angle is 57° .

Mild

1 Match each angle to its picture and number of right angles.

90°



1 right angle

180°



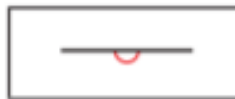
4 right angles

270°



3 right angles

360°



2 right angles

2 Complete the sentences.

There is right angle in a quarter turn.

A quarter turn is degrees.

There are right angles in a half turn.

A half turn is degrees.

There are right angles in a three-quarter turn.

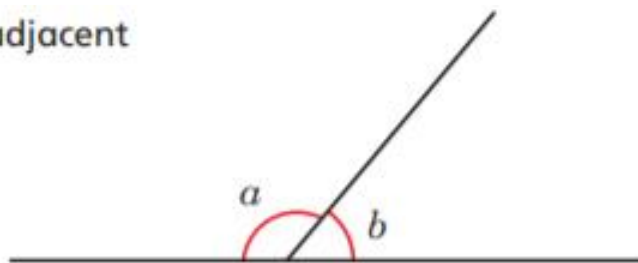
A three-quarter turn is degrees.

There are right angles in a full turn.

A full turn is degrees.

Calculate angles

- 1 Two angles, a and b , are adjacent on a straight line.



- a) Measure angles a and b .

$$a = \boxed{}$$

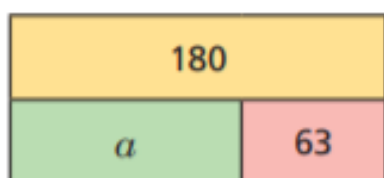
$$b = \boxed{}$$

- b) What is the total of the two angles?

- c) Complete the sentence.

Adjacent angles on a straight line _____

- 2 a) Complete the fact family for the bar model.



$$a + 63 = \boxed{}$$

$$180 - \boxed{} = a$$

$$63 + \underline{} = \boxed{}$$

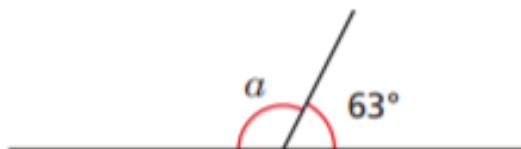
$$180 - a = \boxed{}$$

- b) Tick the calculation in part a) that helps you work out the value of a .

- c) Work out the value of a .

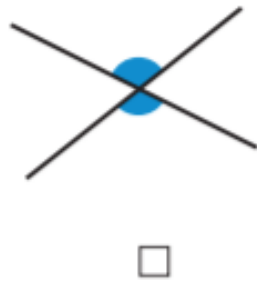
$$a = \boxed{}$$

- d) How does the bar model help you to calculate angle a ?



Vertically opposite angles

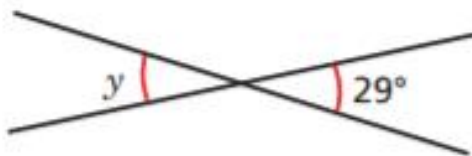
Tick the pairs of angles that are vertically opposite.



Work out the sizes of the unknown angles.

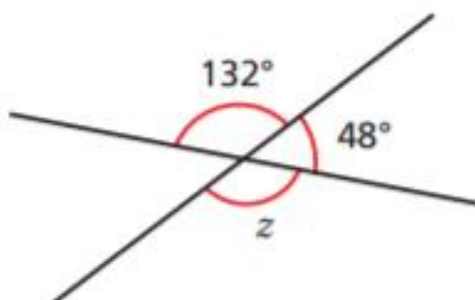
Give reasons for your answers.

a)



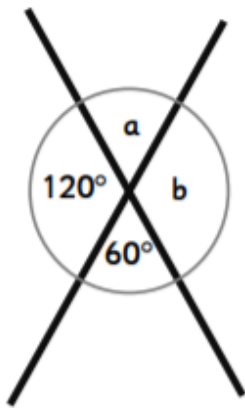
$y =$ because _____

b)



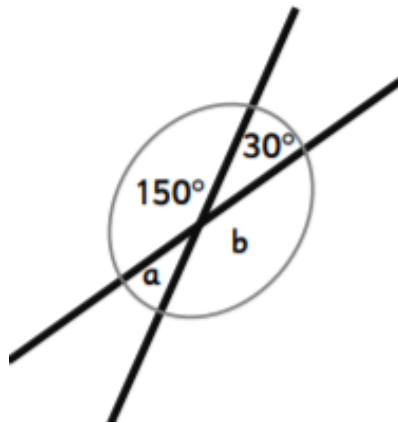
$z =$ because _____

Calculate the missing angles.



$$a = \boxed{}$$

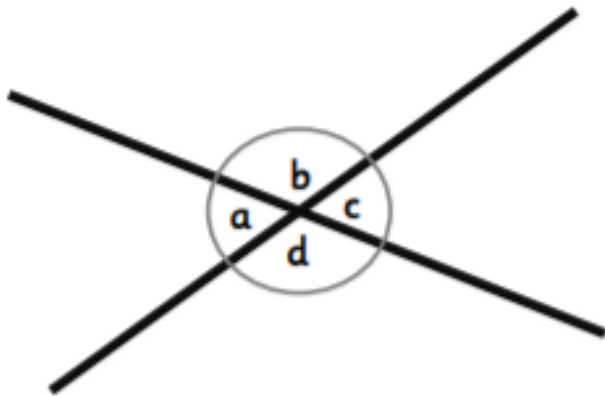
$$b = \boxed{}$$



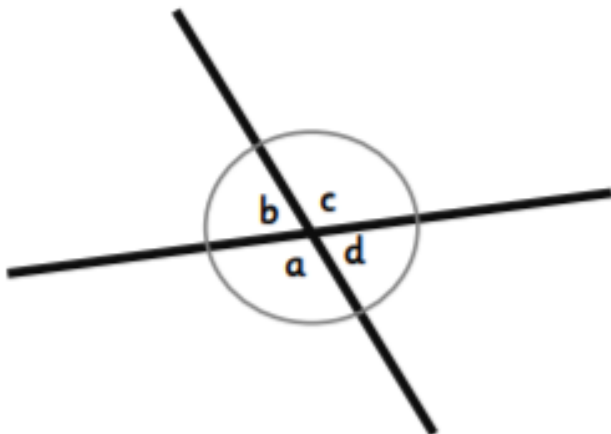
$$a = \boxed{}$$

$$b = \boxed{}$$

If angle a measures 50° , what is the size of angle b ?

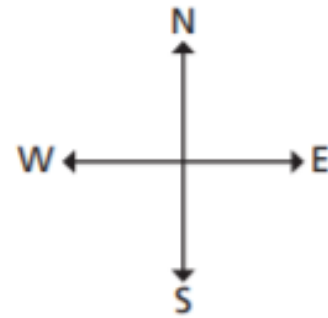


If angle b measures 70° , what is the size of angle c ?



Medium

Here is a compass.



a) Huan is facing north.

He turns half a turn.

What direction is he facing now?

b) Whitney is facing east.

She turns 180° .

What direction is she facing now?

c) Alex is facing west.

She turns a quarter turn clockwise.

What direction is she facing now?

d) Amir is facing west.

He turns 90° anticlockwise.

What direction is he facing now?

e) Kim is facing south.

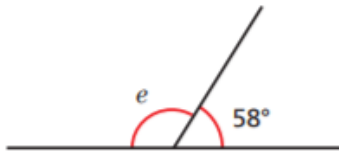
What angle does she need to turn through to face east?

Is there more than one answer?

Calculate angles

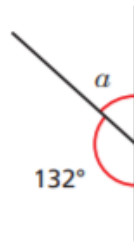
Work out the unknown angles.

a)



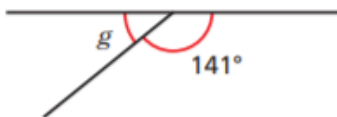
$$e = \boxed{}$$

d)



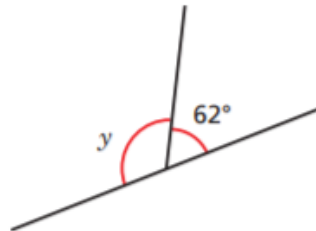
$$a = \boxed{}$$

b)



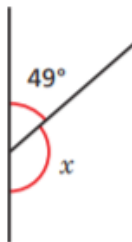
$$g = \boxed{}$$

e)



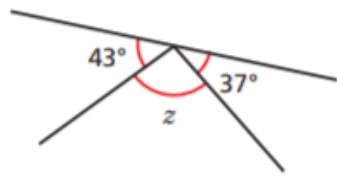
$$y = \boxed{}$$

c)



$$x = \boxed{}$$

f)

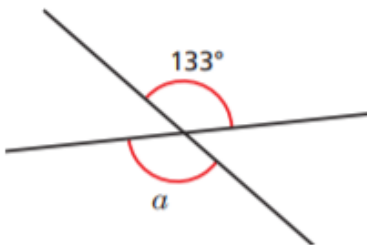


$$z = \boxed{}$$

Vertically opposite angles

Work out the unknown angles.

a)



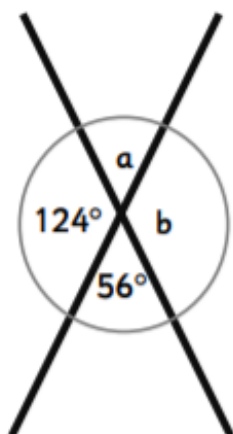
$$a = \boxed{}$$

b)



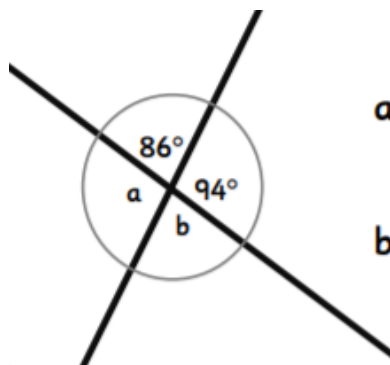
$$b = \boxed{}$$

Calculate the missing angles



$$a = \boxed{}$$

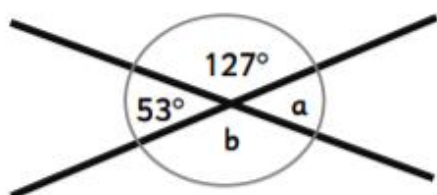
$$b = \boxed{}$$



$$a = \boxed{}$$

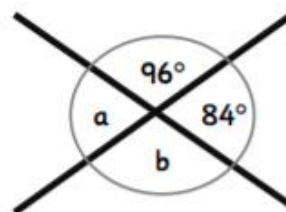
$$b = \boxed{}$$

Complete the statement.



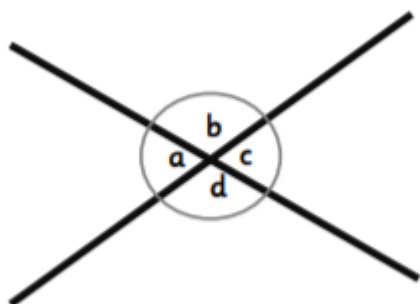
$$a + b = \boxed{}$$

Complete the statement.

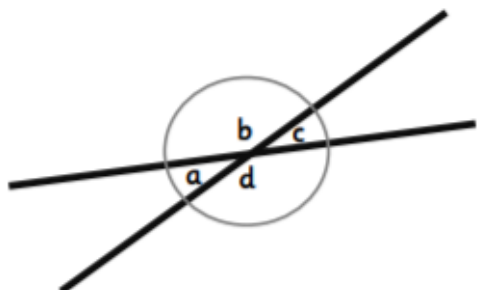


$$96^\circ + 84^\circ + a + b = \boxed{}$$

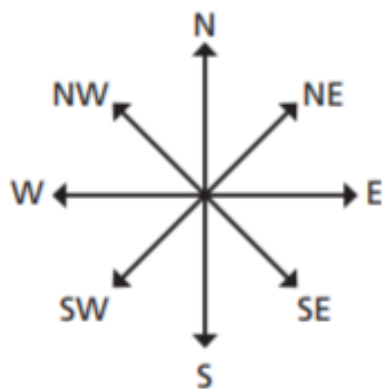
If angle a measures 86° , what is the size of angle b?



If angle c measures 47° , what is the size of angle d?



Spicy



a) Dexter is facing north-east.

He turns half a turn.

What direction is he facing now?

b) Esther is facing south-west.

She turns 270° anticlockwise.

What direction is she facing now?

c) Mo is facing south-west.

He turns, and he is still facing south-west.

How many degrees did he turn through?

Complete the statements.

a) $\frac{1}{2}$ of a full turn =

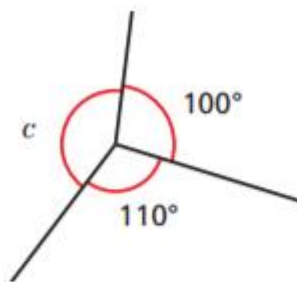
b) $\frac{1}{4}$ of a full turn =

c) $\frac{3}{4}$ of a full turn =

Calculate angles

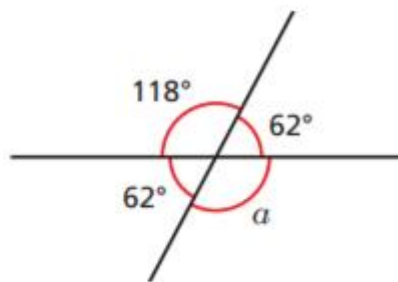
Work out the unknown angles.

a)



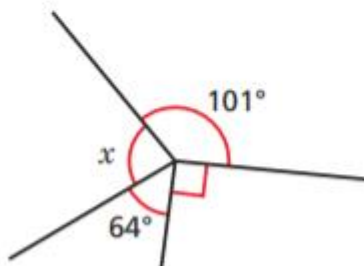
$$c = \boxed{}$$

c)



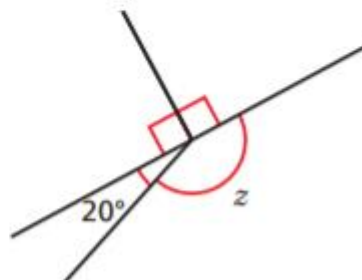
$$a = \boxed{}$$

b)

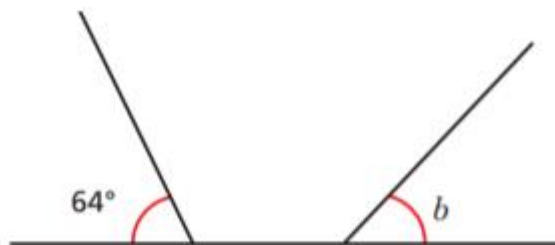


$$x = \boxed{}$$

d)



$$z = \boxed{}$$



Angle b is 116°
because angles on
a straight line add
up to 180° .

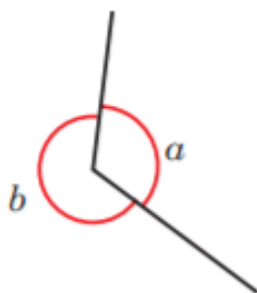


Do you agree with Tommy? _____

Explain your answer.

Use the information to work out the unknown angles.

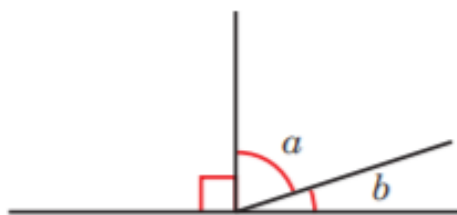
a) Angle a is half the size of angle b .



$$a = \boxed{}$$

$$b = \boxed{}$$

b) Angle a is four times the size of angle b .



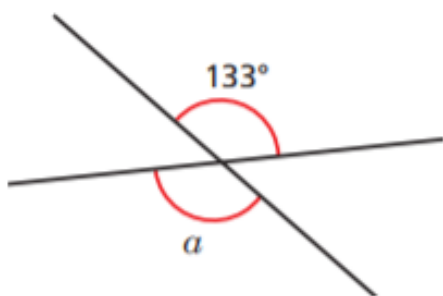
$$a = \boxed{}$$

$$b = \boxed{}$$

Vertically opposite angles

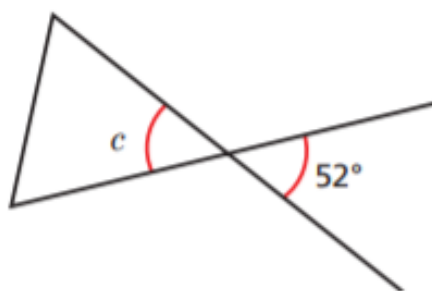
Work out the unknown angles.

a)



$$a = \boxed{}$$

c)



$$c = \boxed{}$$

b)



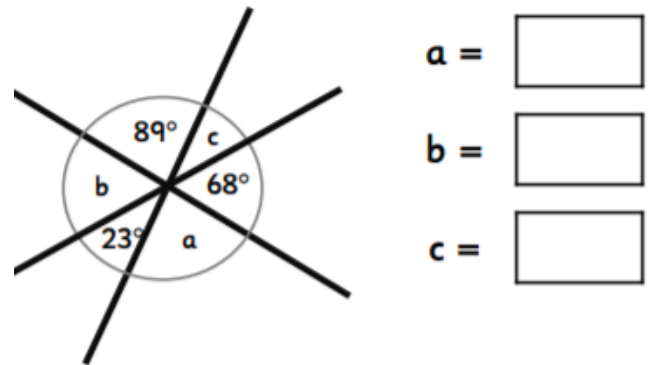
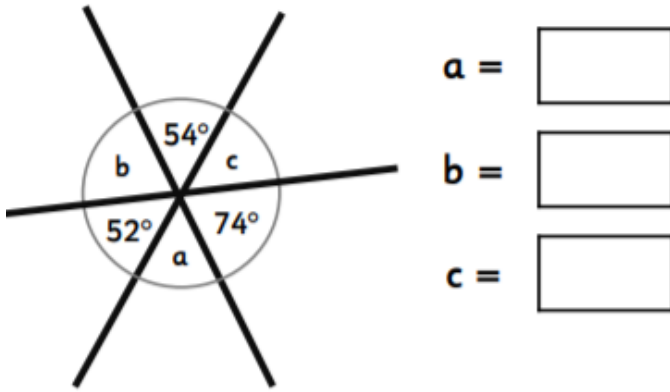
$$b = \boxed{}$$

d)

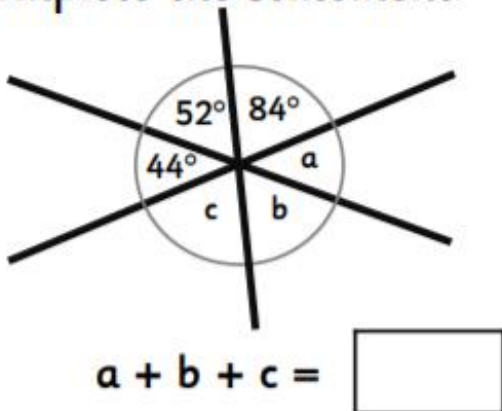


$$d = \boxed{}$$

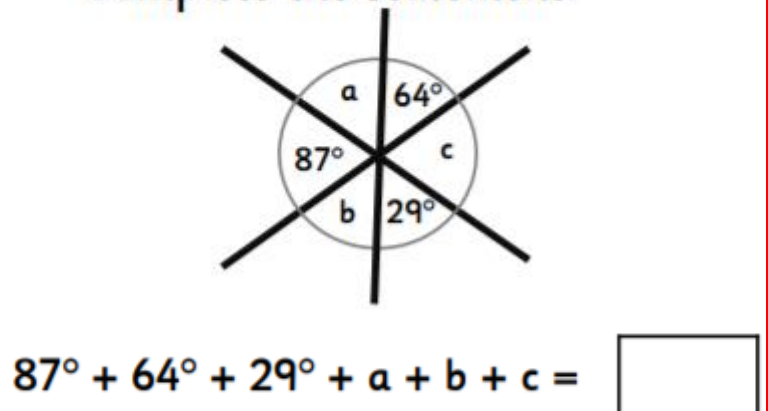
Calculate the missing angles



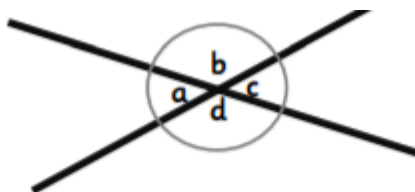
Complete the statement.



Complete the statement.

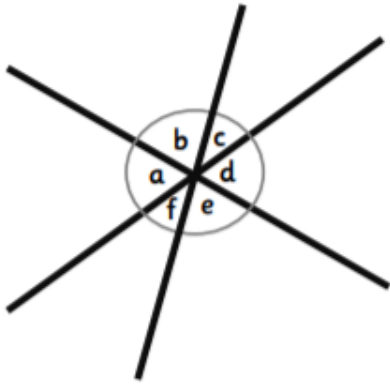


Knowing that d measures 131° , identify whether these statements are true or false:



- a. Angle c measures 49° .
- b. Angles b and d total 180° .
- c. Angles a , b and c total 229° .
- d. Angles a and c total 100° .

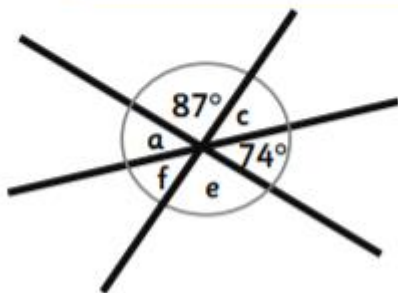
If angle b measures 79° and angle c measures 48° , what is the size of angle d?



Barney says:



I think that angle c measures 29° .

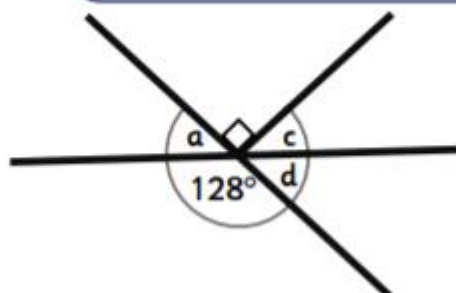


Is Barney correct? Explain why.

Shona says:



I think that angle c measures 48° .



Is Shona correct? Explain why.

Tuesday

<https://www.bbc.co.uk/bitesize/tags/zncsscw/year-6-lessons/1>

<https://whiterosemaths.com/homelearning/year-6/>

Angles in triangles

Fluent in 5

1	$\times 100 = 13.38$	 1 mark
2	$653 \div 8 =$	 1 mark
3	$\frac{5}{12} + \frac{1}{3} =$	 1 mark

4

$25\% \text{ of } 140 =$

☐

1 mark

5

$784 - 220 =$

☐

1 mark

6

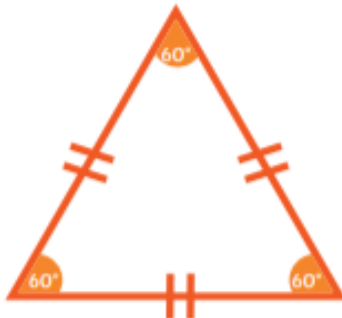
$3,832 \times 18 =$

☐

2 marks

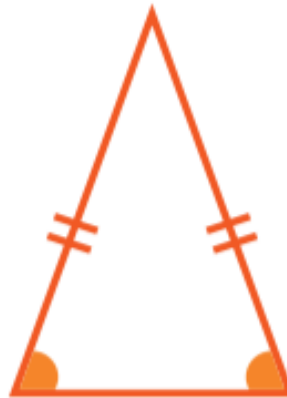
Types of Triangle

equilateral



3 equal sides
3 equal angles (60°)

isosceles



2 equal sides
2 equal angles

right angle



One angle is a right angle (90°)
Two other angles add up to 90°
The longest side is called the hypotenuse.

scalene



All sides are different
All angles are different.

Types of Triangle by Angle

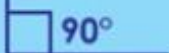
Other triangles may be classified by what kind of angles they have.



Right Triangle

One internal 90° angle

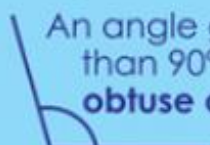
A 90° angle is a **right angle**



Obtuse Triangle

One internal angle greater than 90°

An angle greater than 90° is an **obtuse angle**



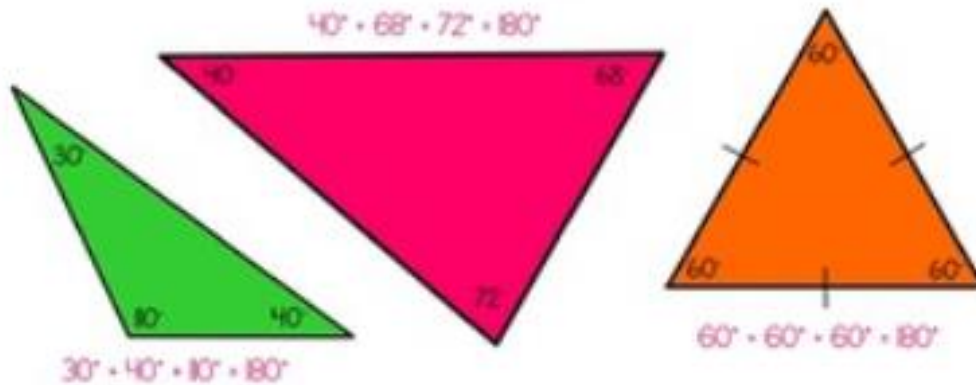
Acute Triangle

Internal angles less than 90°

An angle less than 90° is an **acute angle**



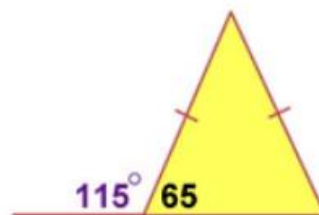
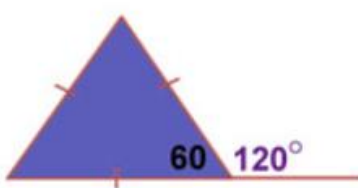
Interior Angles of a Triangle



The **interior angles of a triangle** add up to 180° .

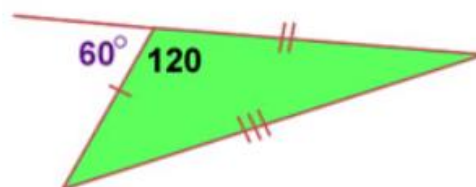
©2005 A. Allen

Interior & Exterior angles of a Triangle always add up to make 180 degrees.



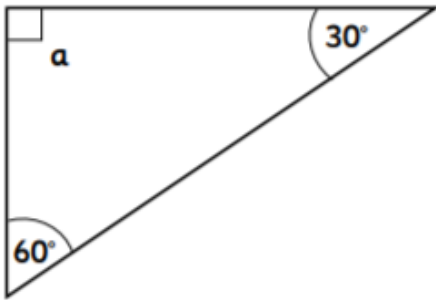
The "Exterior" Angle for any Interior angle is created by extending out the side of the triangle.

This Exterior Angle is always $180 - \text{Internal Angle}$

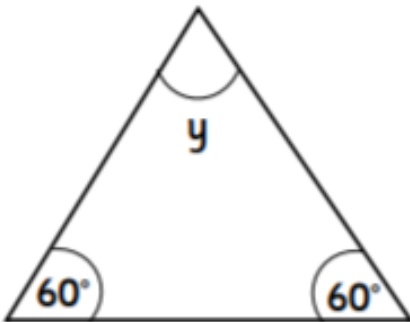


Mild

All the angles in a triangle add to make 180° . Find angle a .



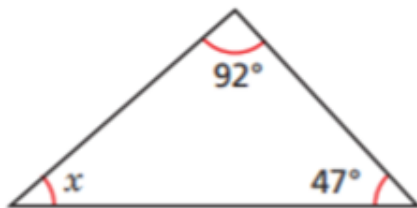
All the angles in a triangle add to make 180° . Find angle y .



Work out the sizes of the unknown angles.

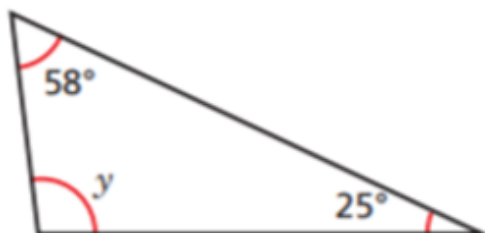
Give reasons for your answers.

a)



$x =$ because _____

b)



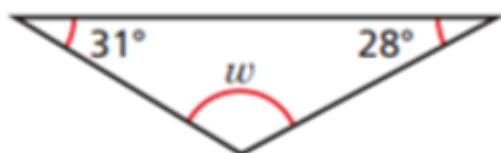
$y =$ because _____

c)



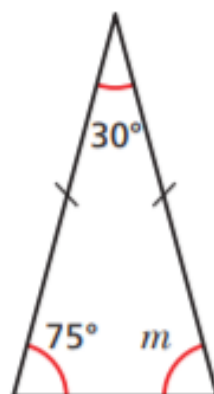
$z =$ because _____

d)



$w =$ because _____

Here is a triangle.



a) What type of triangle is it?

How do you know?

b) Work out the size of angle m .

c) What do you notice?

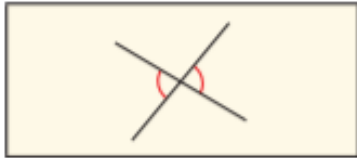
d) Complete the sentence to describe the angles in an isosceles triangle.

In an isosceles triangle _____

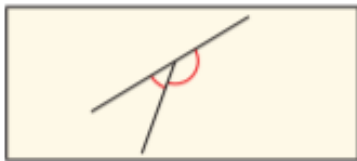
Match each diagram to the correct rule.



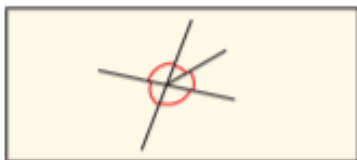
Angles on a straight line sum to 180°



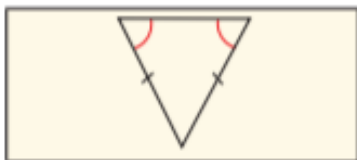
Angles around a point sum to 360°



Angles in a triangle sum to 180°

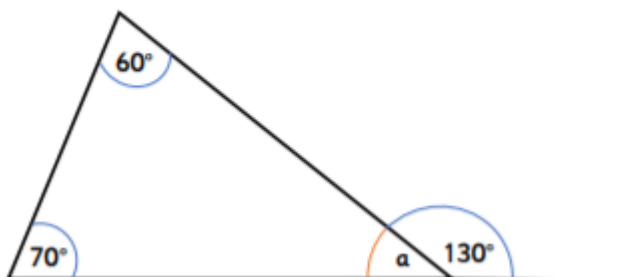


In an isosceles triangle, two angles are equal

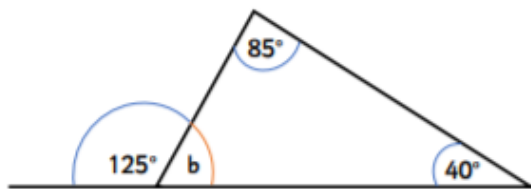


Vertically opposite angles are equal

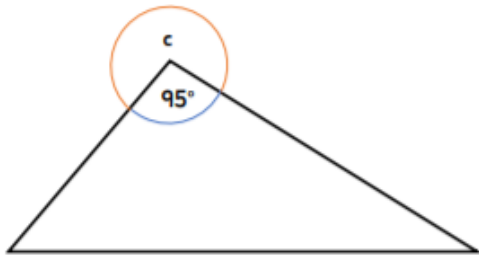
Calculate the missing angle.



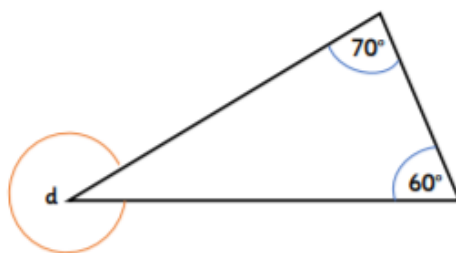
Calculate the missing angle.



Calculate the missing angle.

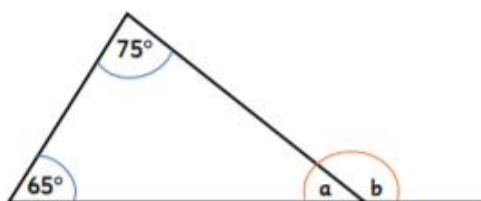


Calculate the missing angle.



Kelly says:

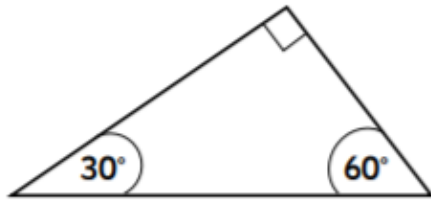
It's impossible for me to calculate all of the missing angles.



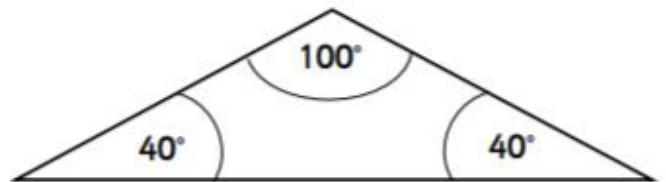
Is Kelly correct? Explain why.

Medium

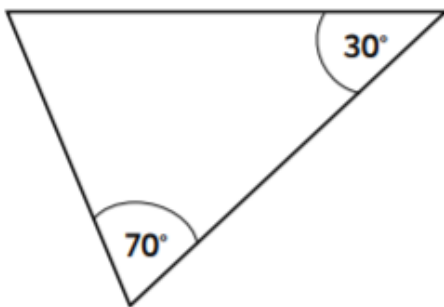
What kind of triangle is this?



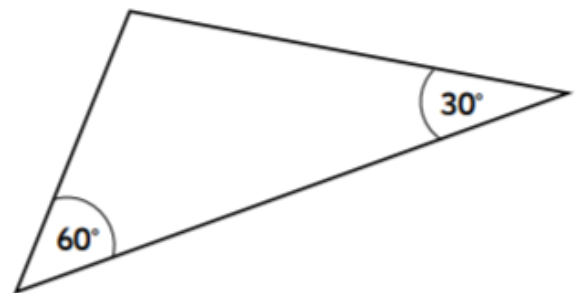
What kind of triangle is this?



a. Find the missing angle.



b. Find the missing angle.



a) Two angles in a triangle are 42° and 57° .

What is the size of the third angle?

b) Two of the angles in a triangle are 12° .

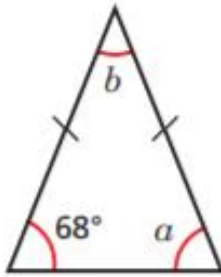
What is the size of the third angle?

c) One of the angles in a triangle is 38° . Another angle is twice the size of the first angle.

What is the size of the third angle?

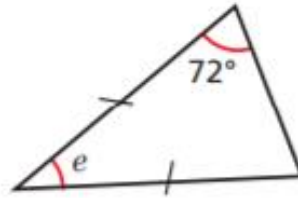
Work out the sizes of the unknown angles.

a)



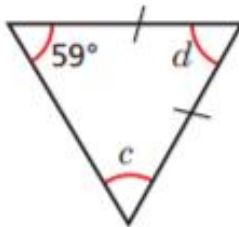
$$a = \boxed{} \quad b = \boxed{}$$

c)



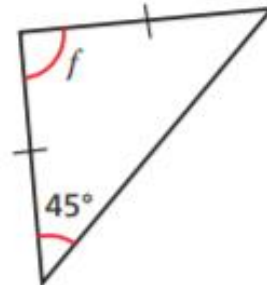
$$e = \boxed{}$$

b)



$$c = \boxed{} \quad d = \boxed{}$$

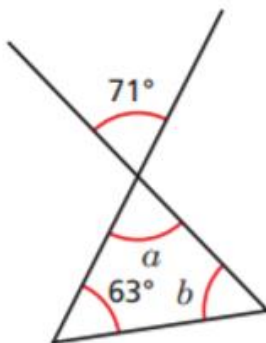
d)



$$f = \boxed{}$$

Give reasons for each stage of your working.

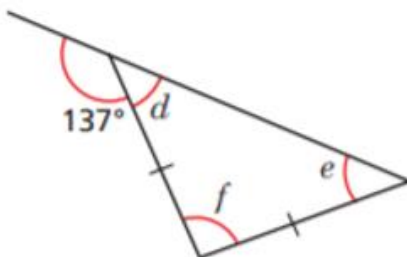
a)



$$a = \boxed{} \text{ because } \underline{\hspace{2cm}}$$

$$b = \boxed{} \text{ because } \underline{\hspace{2cm}}$$

b)

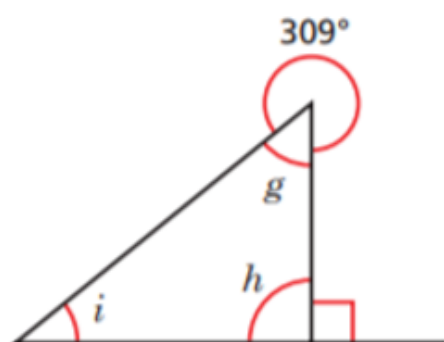


$$d = \boxed{} \text{ because } \underline{\hspace{2cm}}$$

$$e = \boxed{} \text{ because } \underline{\hspace{2cm}}$$

$$f = \boxed{} \text{ because } \underline{\hspace{2cm}}$$

c)

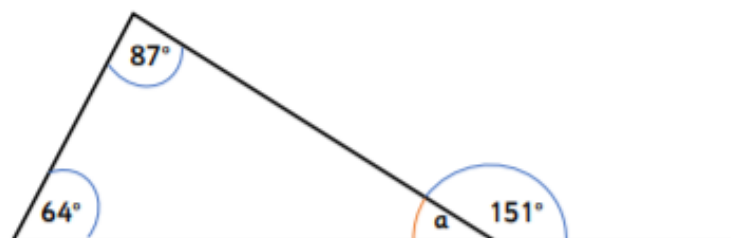


$g =$ because _____

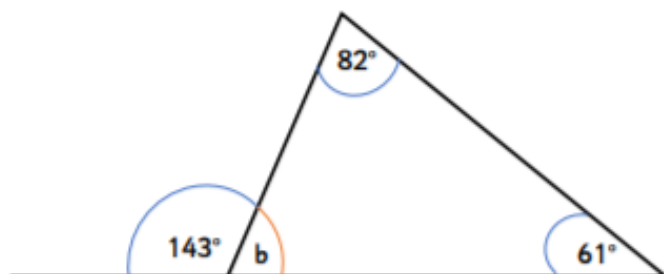
$h =$ because _____

$i =$ because _____

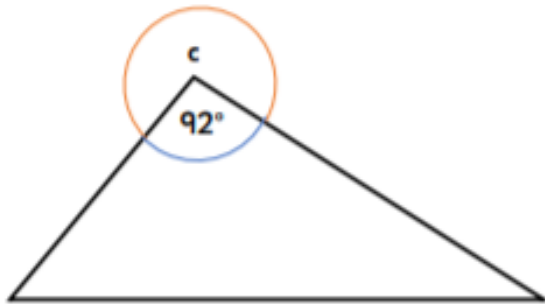
Calculate the missing angle.



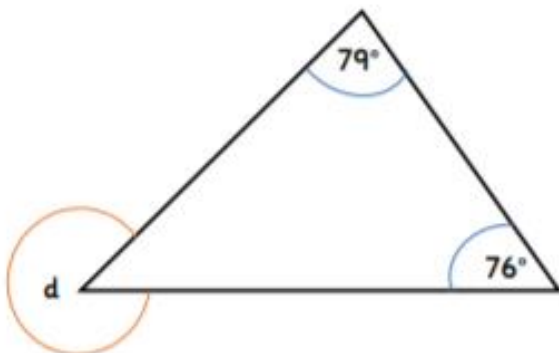
Calculate the missing angle.



Calculate the missing angle.

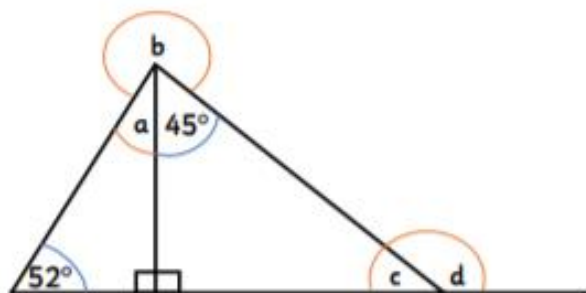


Calculate the missing angle.



Rosie says:

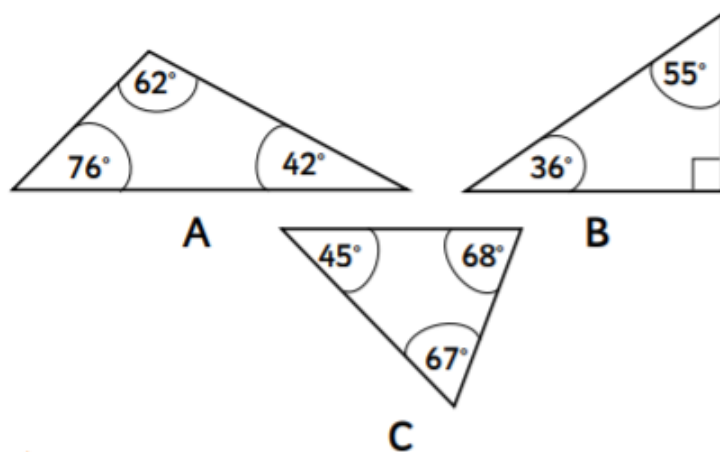
It's impossible for me to calculate all of the missing angles.



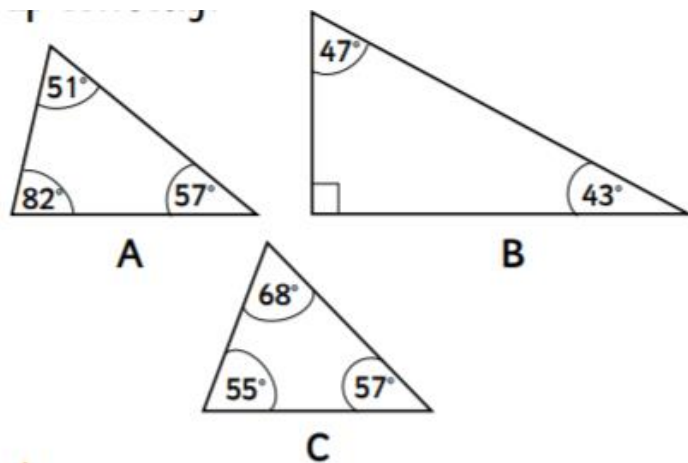
Is Rosie correct? Explain why.

Spicy

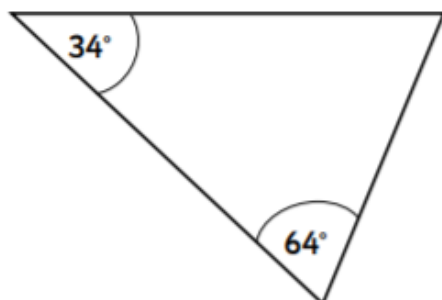
Which triangle's angles do not add up correctly?



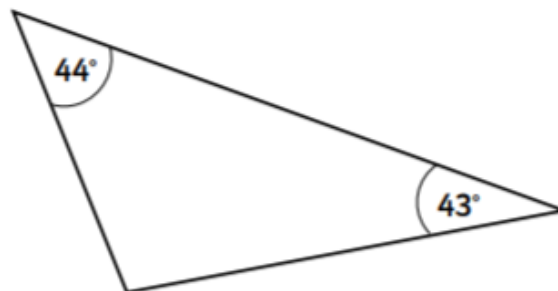
Which triangle's angles do not add up correctly?



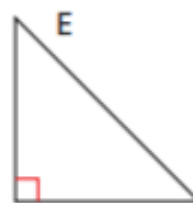
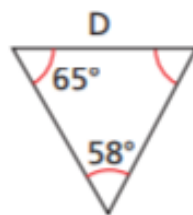
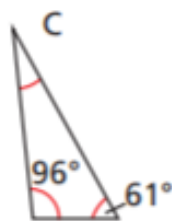
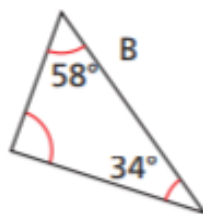
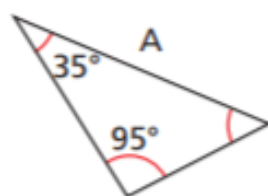
a. Find the missing angle.



b. Find the missing angle.

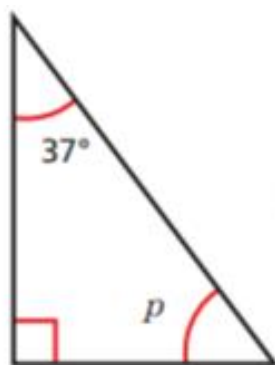


Sort the triangles into the table.



0 acute angles	1 acute angle	2 acute angles	3 acute angles

Are any of the columns empty? Why?



$p = 143^\circ$ because angles in a triangle sum to 180° and $180 - 37 = 143$

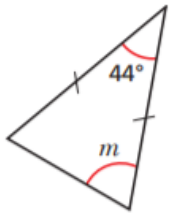


Do you agree with Ron? _____

Explain your answer.

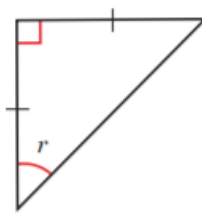
Work out the sizes of the unknown angles.

a)



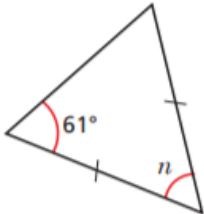
$$m = \boxed{}$$

c)



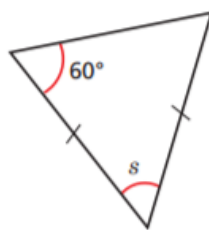
$$r = \boxed{}$$

b)



$$n = \boxed{}$$

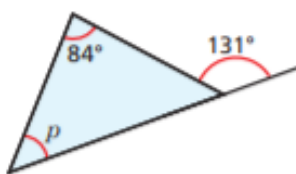
d)



$$s = \boxed{}$$

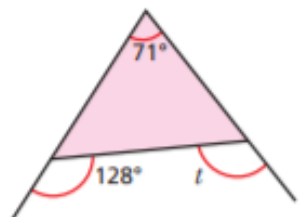
Work out the sizes of the angles marked with letters.

a)



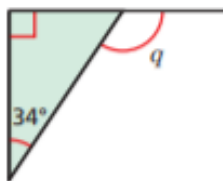
$$p = \boxed{}$$

e)



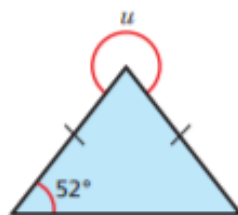
$$t = \boxed{}$$

b)



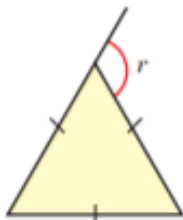
$$q = \boxed{}$$

f)



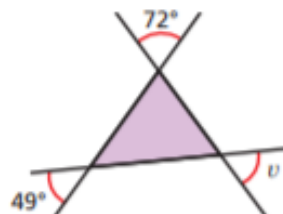
$$u = \boxed{}$$

c)



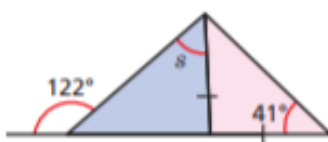
$$r = \boxed{}$$

g)



$$v = \boxed{}$$

d)



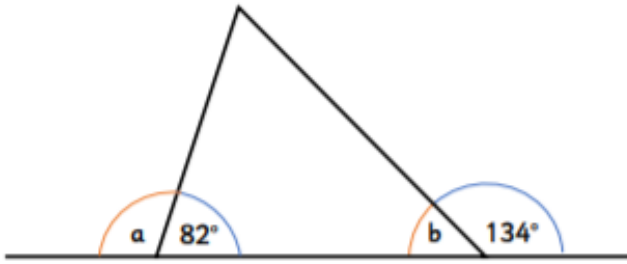
$$s = \boxed{}$$

h)

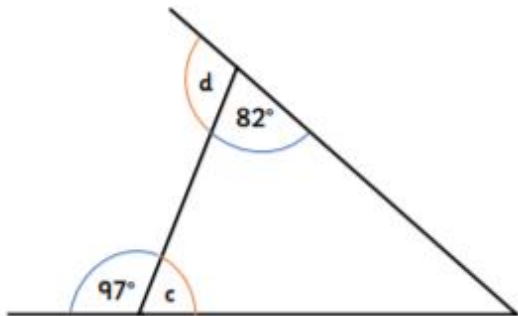


$$w = \boxed{}$$

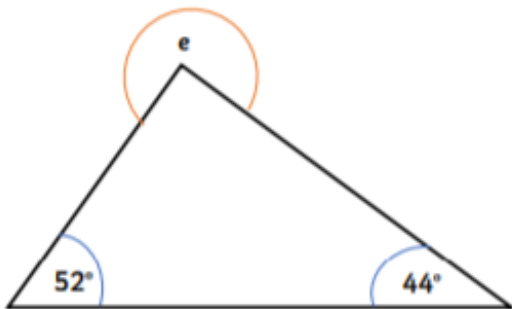
Calculate the missing angle.



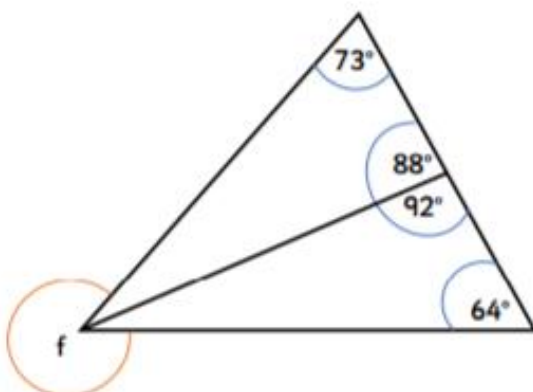
Calculate the missing angle.



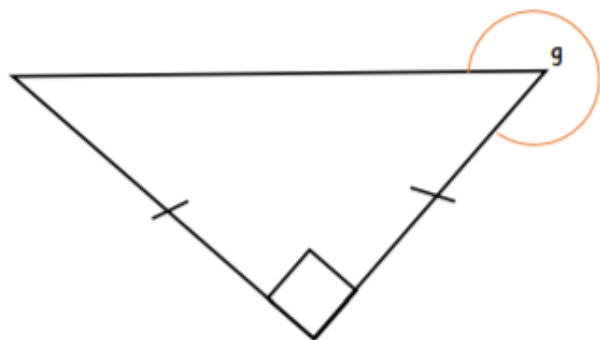
Calculate the missing angle.



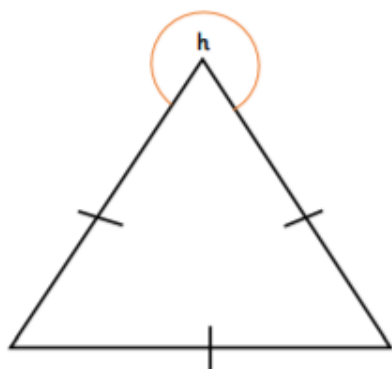
Calculate the missing angle.



Calculate the missing angle.

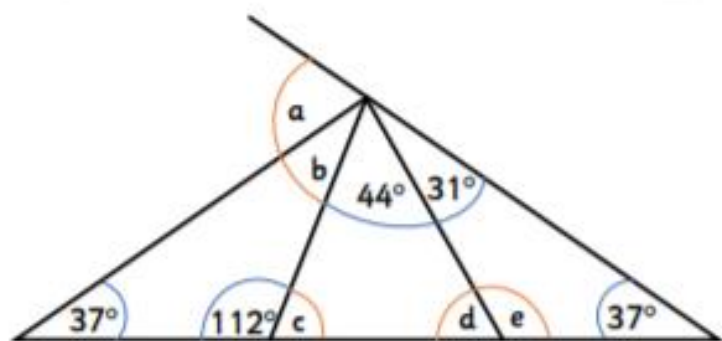


Calculate the missing angle.



Stan says:

It is possible for me to
calculate all of the
missing angles.



Is Stan correct? Explain why.

Wednesday

<https://www.bbc.co.uk/bitesize/tags/zncsscw/year-6-lessons/1>

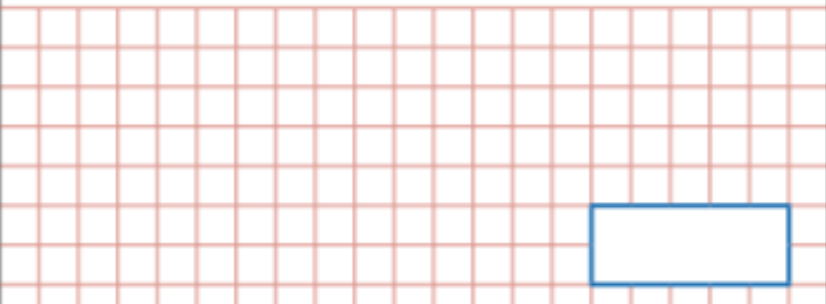
<https://whiterosemaths.com/homelearning/year-6/>

Angles in quadrilaterals

Fluent in 5

1	$8^2 =$	
		
		☐ 1 mark

2	$21 \overline{) 874}$	
		
		☐ 2 marks

3	$8 + 3 \times 6 =$	
		
		☐ 1 mark

4

$35\% \text{ of } 60 =$

1 mark

5

$\frac{1}{4} + \frac{1}{20} =$

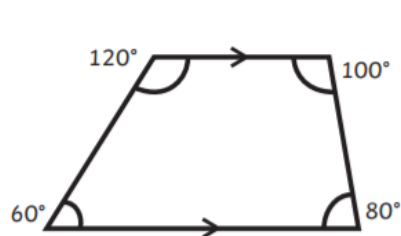
1 mark

6

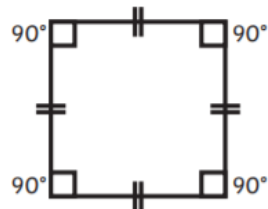
$7,584 + 19,848 =$

1 mark

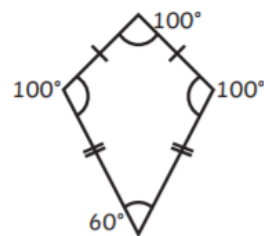
The interior angles in all quadrilaterals total 360°



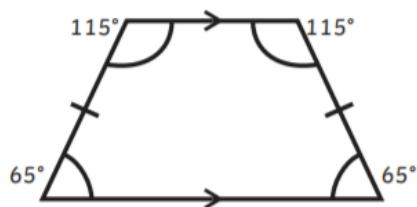
Irregular Trapezium



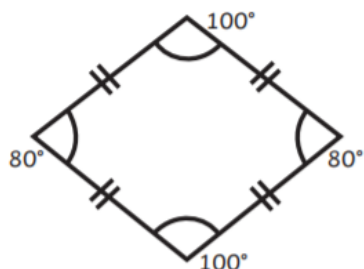
Square



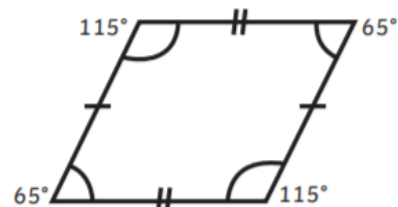
Kite



Isosceles Trapezium

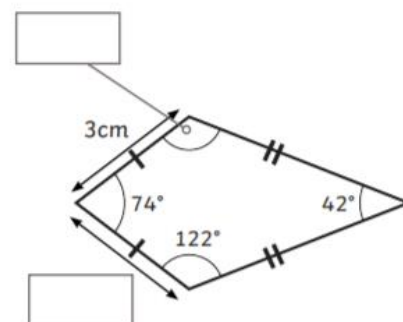
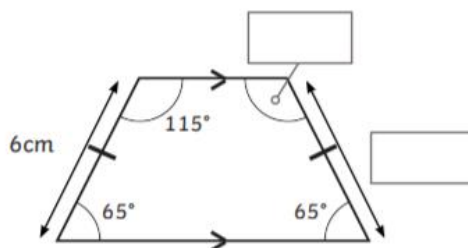
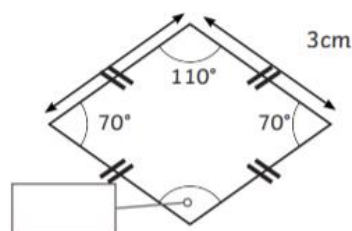
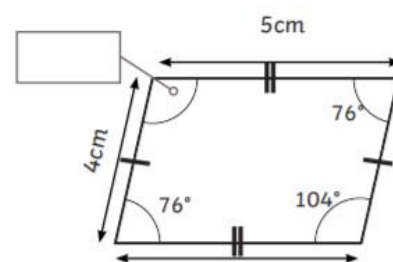
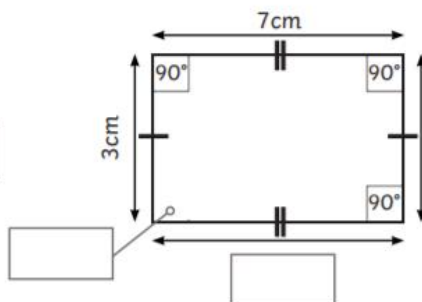
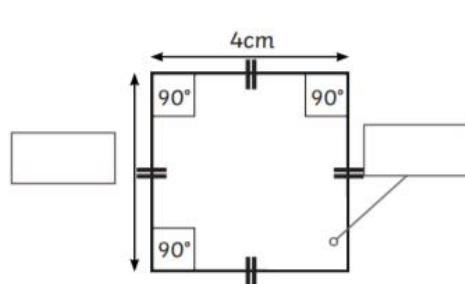


Rhombus



Parallelogram

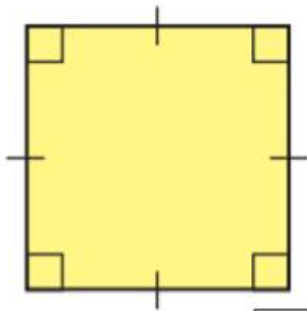
We can use the properties of quadrilaterals to find missing angles and lengths



Mild

Work out the sum of the angles in each shape.

a)



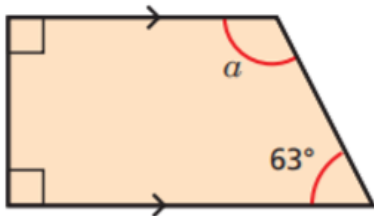
b)



What do you notice?

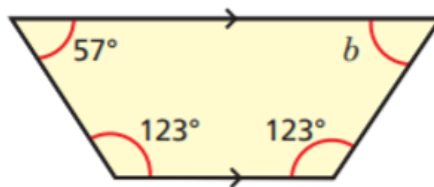
Work out the size of the unknown angle in each trapezium.

a)



$$a = \boxed{}$$

b)



$$b = \boxed{}$$

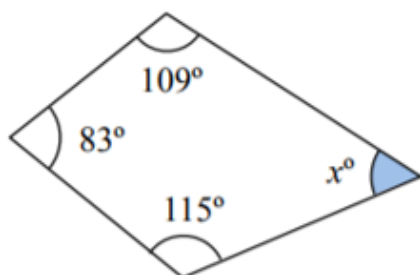
Mollie says,



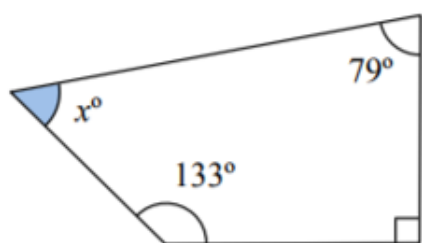
Rectangles have 4
angles of 90°

Is she correct?

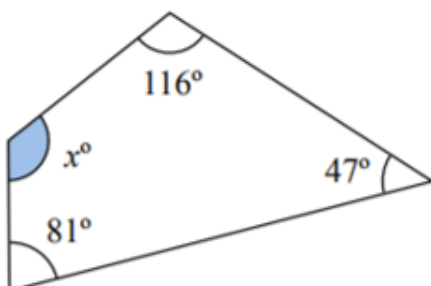
A1 Work out the value of x



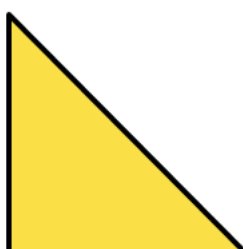
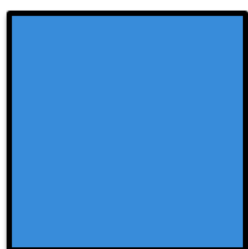
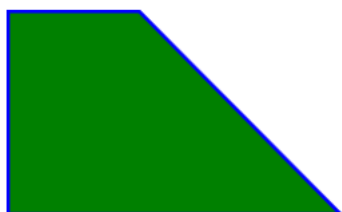
A2 Work out the value of x



A3 Work out the value of x



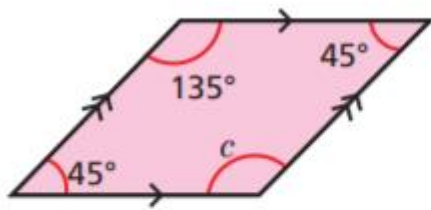
Which one doesn't belong?



Medium

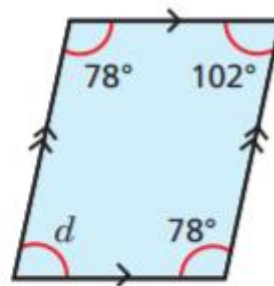
Work out the sizes of the unknown angles.

a)



$$c = \boxed{}$$

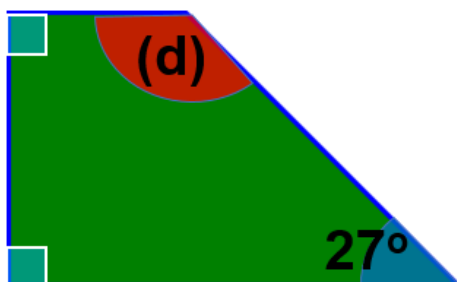
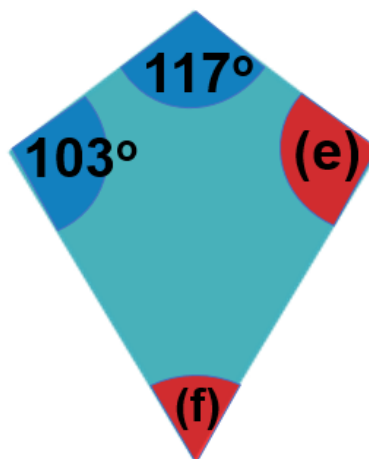
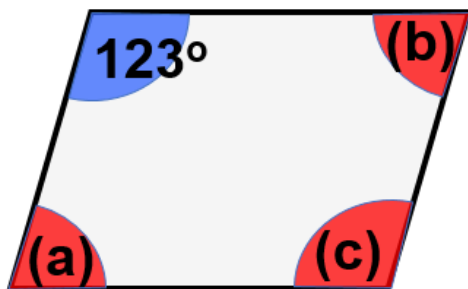
b)



$$d = \boxed{}$$

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

What are the values of the missing angles?



True or false?

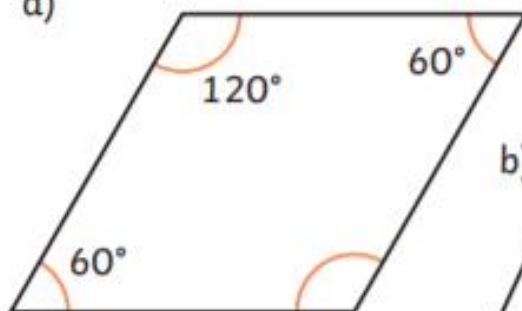
Explain your answer

- a) Adam says, "To be a quadrilateral, a polygon needs to have at least one right-angle."
- b) Sally says, "All quadrilaterals have at least one acute angle."

- 1) Give the missing angle in each of these quadrilaterals. Explain how you found your answer. Is there a way to find the angles in some of the shapes without having to carry out a calculation?

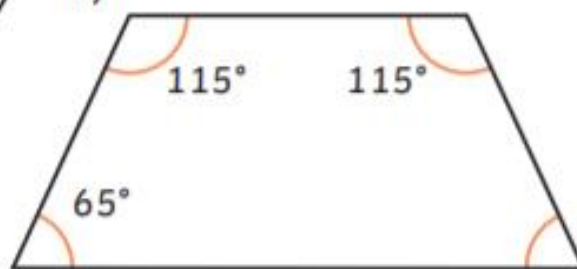


a)

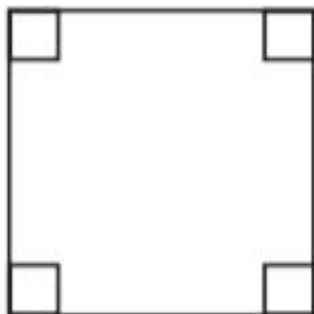


Not to scale

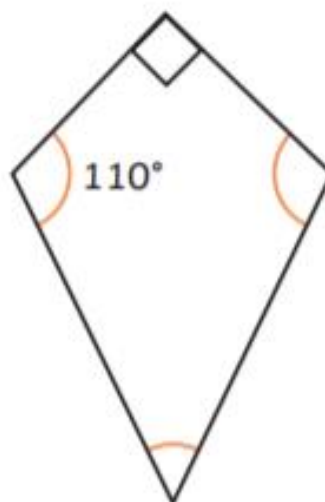
b)



c)



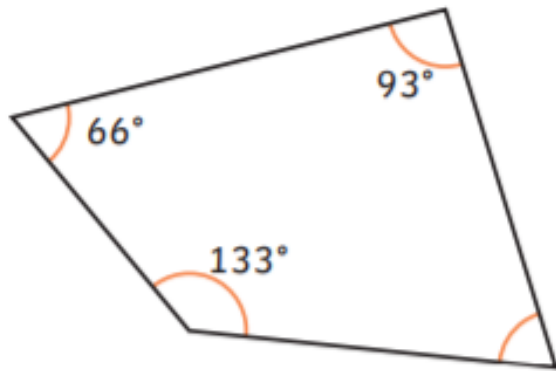
d)



2) Calculate the missing angles in each of these quadrilaterals.

Not to scale

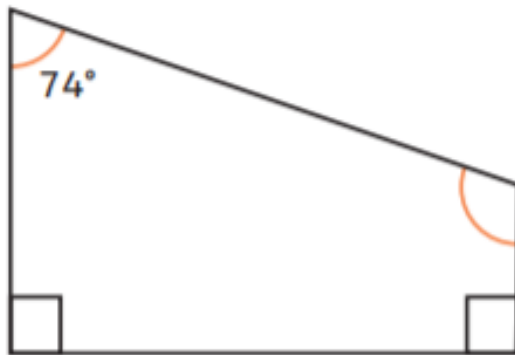
a)



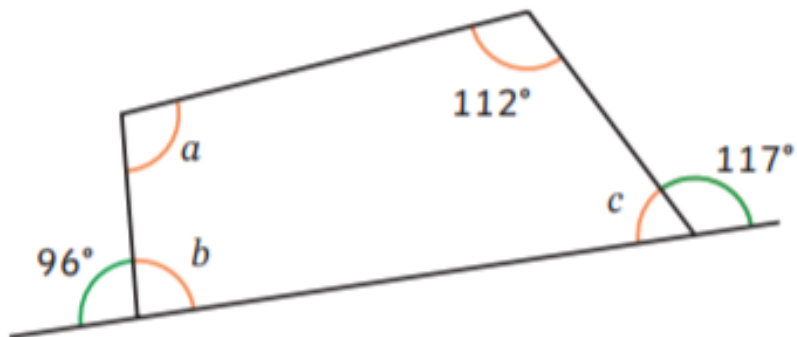
b)



c)

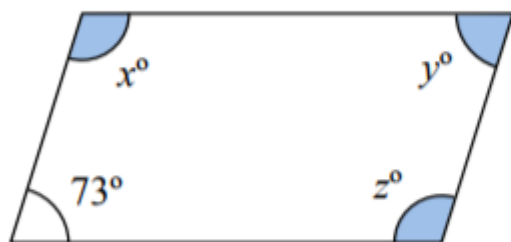


d)



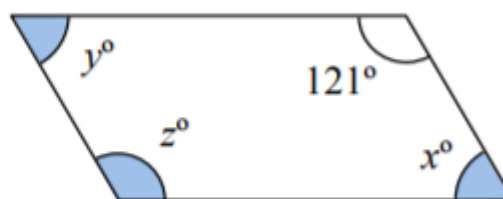
Spicy

B1 This is a parallelogram.



Work out the values of x , y and z

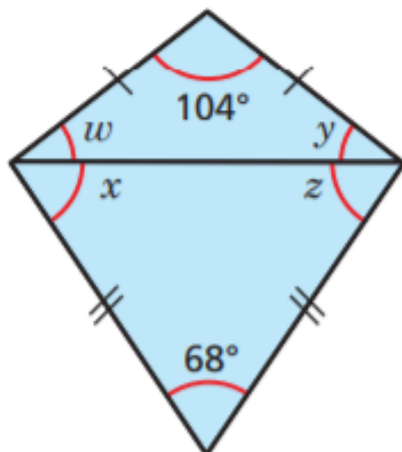
B2 This is a parallelogram.



Work out the values of x , y and z

Two isosceles triangles are joined to form a kite.

a) Work out the sizes of the unknown angles.



$$w = \boxed{}$$

$$y = \boxed{}$$

$$x = \boxed{}$$

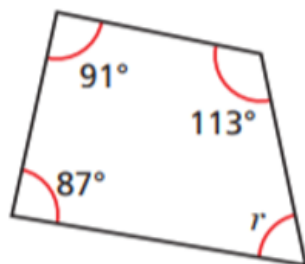
$$z = \boxed{}$$

b) Work out $w + x$.

c) Work out $y + z$.

Work out the sizes of the unknown angles.

a)



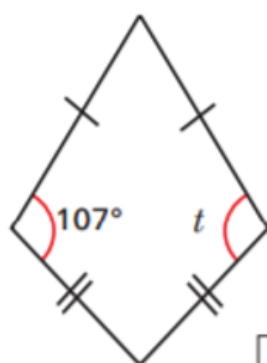
$$r = \boxed{}$$

b)



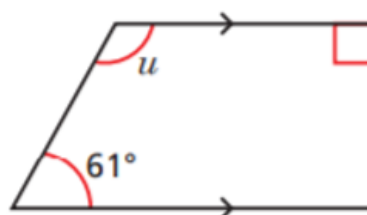
$$s = \boxed{}$$

c)



$$t = \boxed{}$$

d)



$$u = \boxed{}$$

Teddy is drawing a quadrilateral.

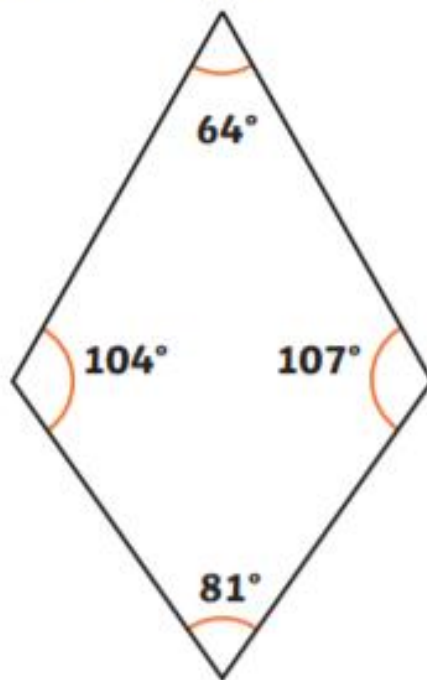
My quadrilateral has exactly three right-angles.



Is Teddy's quadrilateral possible? _____

Explain your answer.

- 1) Monika measured the angles in this kite shape with a protractor and labelled it with the angles she found.



Not to scale

Leo says, "Without measuring the angles myself, I think I have found two reasons to prove Monika hasn't measured the angles correctly."

Which two reasons do you think Leo has found to explain how he knows that Monika has not measured the angles correctly in the kite? Explain your answer fully.

- 2) In a quadrilateral, two of the angles measure 17° and 84° .

Which of the following could be the pair of angles that is missing?

90° and 123° 66° and 35°

147° and 112° 160° and 87°



- 3) Which of these sets of angles could belong to a parallelogram? Which could not? Explain your answer fully.



- a) $71^\circ, 72^\circ, 108^\circ, 109^\circ$
- b) $100^\circ, 100^\circ, 80^\circ, 80^\circ$
- c) $128^\circ, 128^\circ, 51^\circ, 51^\circ$

Important note: quadrilaterals are not drawn to scale, do not use a protractor.

Thursday

<https://www.bbc.co.uk/bitesize/tags/zncsscw/year-6-lessons/1>

<https://whiterosemaths.com/homelearning/year-6/>

Angles in polygons

Fluent in 5

1	$1.38 + 3.48 =$	
		 1 mark

2	$98.384 + 12.843 =$	
		 1 mark

3	$65\% \times 120 =$	
		 1 mark

4

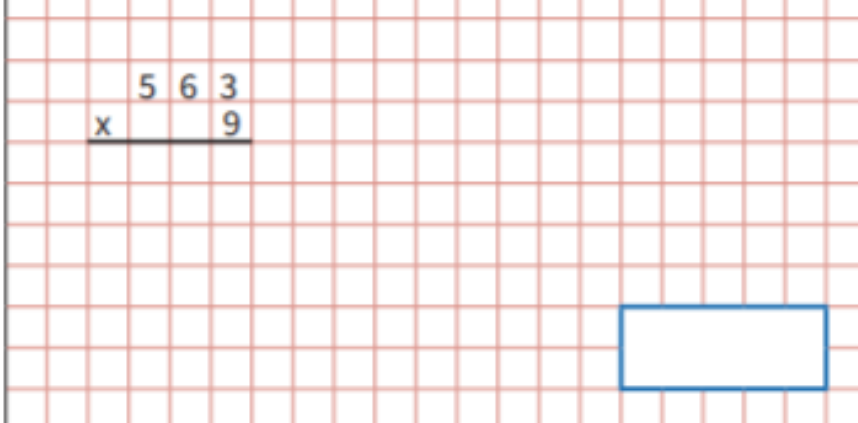
$64 \times 4 =$

☐

1 mark

5

$$\begin{array}{r} 563 \\ \times 9 \\ \hline \end{array}$$

☐

1 mark

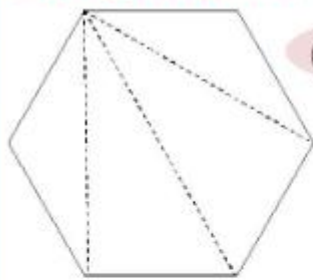
6

$100 \times \boxed{} = 578.4$

☐

1 mark

Angle Sum



$$4 \times 180^\circ = 540^\circ$$

$$(n - 2) \times 180^\circ$$

number of
triangles



triangle



quadrilateral



pentagon



hexagon

7 - heptagon



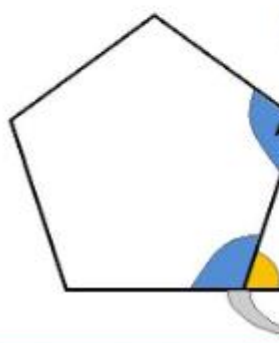
octagon

9 - nonagon

10 - decagon

Polygons

interior angle



$$\frac{\text{angle sum}}{\text{number of sides}}$$

OR

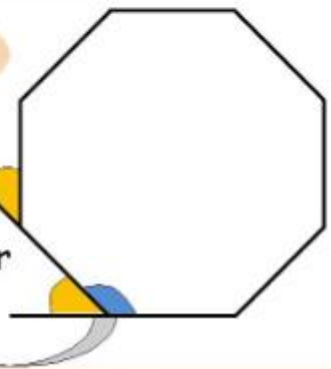
$$180^\circ - \text{exterior angle}$$

exterior angle

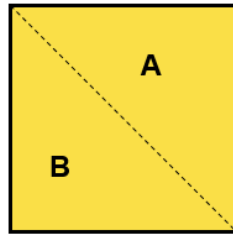
$$\frac{360^\circ}{\text{number of sides}}$$

OR

$$180^\circ - \text{interior angle}$$



Mild

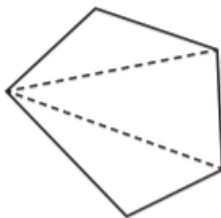


- a) What do the angles of triangle A add up to?
- b) What do the angles of triangle B add up to?
- c) So what is the sum of interior angles in a quadrilateral?

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

The polygons have been split into triangles so that you can work out the sum of their interior angles. The first one has been done for you

a)



number of sides =

5

number of triangles =

3

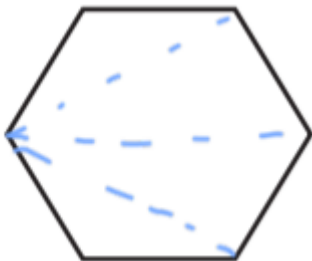
$3 \times 180 =$

540

The sum of the interior angles of a pentagon is

540°

b)



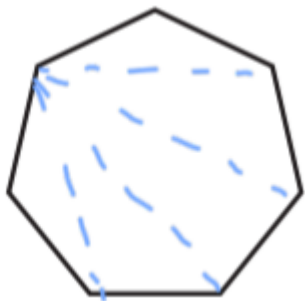
number of sides =

number of triangles =

$\times 180 =$

The sum of the interior angles of a hexagon is

c)



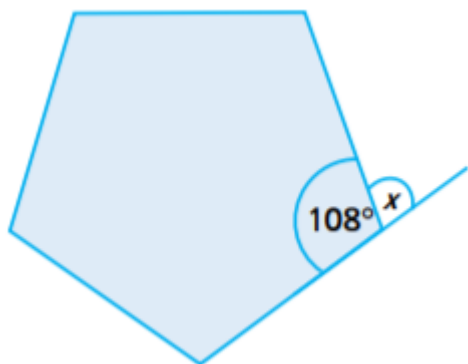
number of sides =

number of triangles =

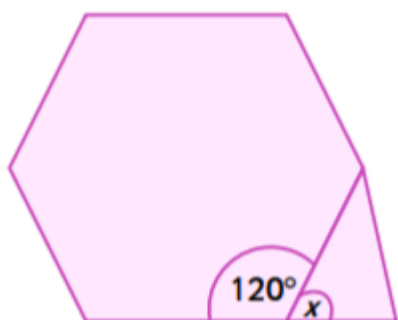
$\times 180 =$

The sum of the interior angles of a heptagon is

The sum of angles on a straight line is 180° . Use this to help you to work out the size of an exterior angle (x) in this pentagon.



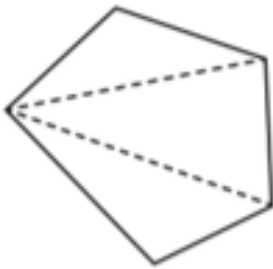
Use your understanding of the sum of angles on a straight line to help you calculate the size of angle x .



Medium

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

This polygon has been split into triangles so that you can work out the sum of their interior angles.



number of sides =

5

number of triangles =

3

$3 \times 180 =$

540

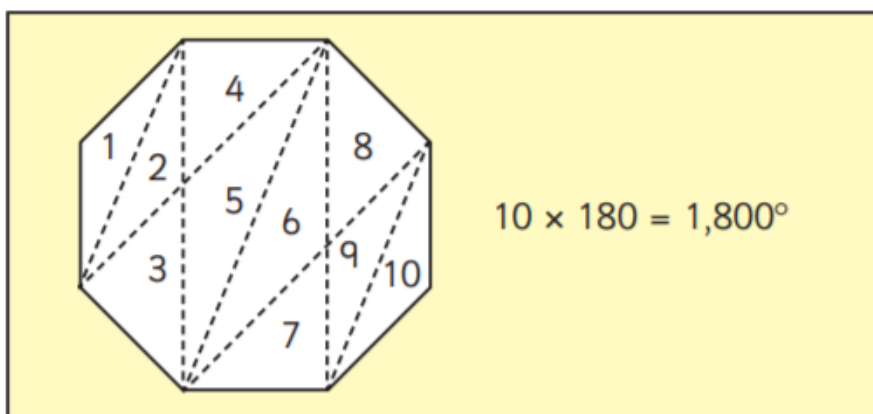
The sum of the interior angles of a pentagon is

540°

Shape	Number of sides	Number of triangles	$180 \times \text{number of triangles}$	Sum of internal angles
 Square	4	2	$2 \times 180^\circ$	360°
 Pentagon	5	3	$3 \times 180^\circ$	540°
 Hexagon				
 Heptagon				
 Octagon				

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

Here are her workings.

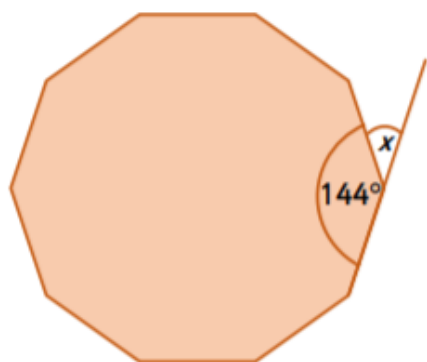


Do you agree with Dani? _____

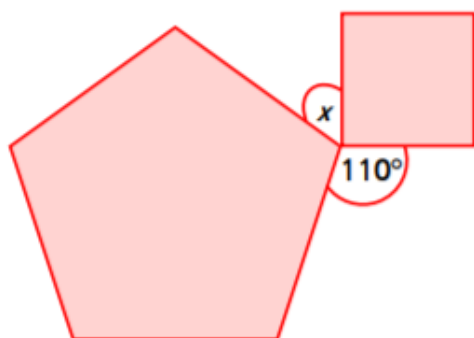
Explain your answer.

Think about the sum of angles on a straight line.

Use this to help you to work out the exterior angle in this decagon (x).



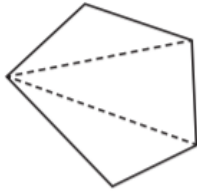
Use your understanding of interior angles of a polygon and angles at a point to help you calculate the size of angle x.



Spicy

The sum of the interior angles of a triangle is 180° . This polygon has been split into triangles so that you can work out the sum of their interior angles.

a)



number of sides =

5

number of triangles =

3

$3 \times 180 =$

540

The sum of the interior angles of a pentagon is

540°

***An octagon can be split into six triangles.
Octagons have a total interior angle of 1080°***

A polygon has 5 triangles in it.
Which shape is it?



True or false?

- a) James says, "A hexagon has its name, because it can be split into six triangles as 'hex' means six."
- b) Sally says, "The total interior angle of a pentagon is more than 540 degrees but less than 720 degrees."
- c) Ellie says, "A ten-sided shape - also called a decagon - can be split into eight triangles and has an angles sum of $1,440^\circ$."

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)

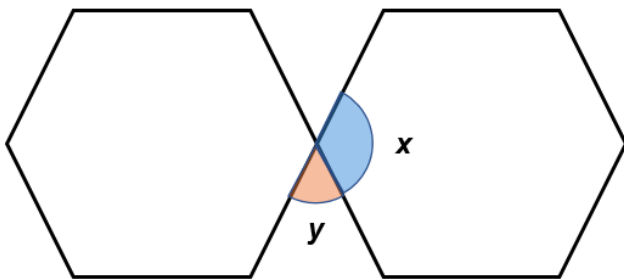


Eva

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?

Two regular hexagons meet. Calculate the value of angles x and y .



Use what you know about angles to find the size of angle x .



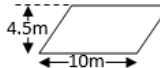
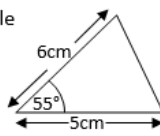
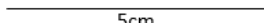
Friday

<https://www.bbc.co.uk/bitesize/tags/zncsscw/year-6-lessons/1>

Challenge of the Week

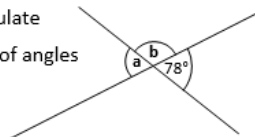
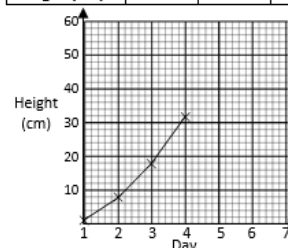
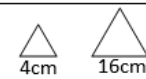
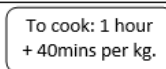
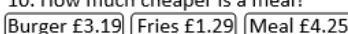
Key Skills

Mild

A: Place Value, Add, Subtract, Multiply and Divide		B: Fractions, Ratio, Proportion and Algebra		C: Measure and Geometry	
1. Write nine million, seven thousand, three hundred and eight in digits.	6:1	11. Which is the largest fraction? $\frac{2}{3}$, $\frac{5}{6}$ or $\frac{7}{12}$	6:7	21. How many miles are approximately equal to 4 kilometres ?	6:18
2. What is the value of the 8 in this number? 1,384,721	6:1	12. $\frac{5}{6} + \frac{1}{9} =$	6:8	22. Give the length and width of two rectangles that have an area of 20m ² .	6:20
3. Round 7.186 to 2 decimal places.	6:1	13. Simplify your answer. $\frac{2}{3} \times \frac{1}{2} =$	6:9	24. Find the area of this parallelogram . 	6:21
4. What is the largest possible crowd? Attendance: 25,000 (to the nearest thousand)	6:2	14. 0.5738 x 1000	6:10	24. Calculate the volume of a cube with a 3cm side length. 	6:22
5. 1,482 x 15	6:3	15. 2.15 x 3	6:11	25. Draw this triangle accurately below: Use a ruler and a protractor. 	6:23
6. 392 ÷ 14	6:3	16. Write this fraction as a decimal and a percentage . $\frac{1}{5}$	6:12		
7. Which is a common multiple of 4 and 6? 2 3 8 12 18	6:4	17. Find 35% of 180.	6:13		
8. Which factor of 25 is also a prime number ?	6:4	18. In a class of 25 pupils, $\frac{3}{5}$ are boys. How many girls are there?	6:14		
9. 68 – 24 ÷ 2	6:5	19. How much will a 5 minute call cost? Call charge: 30p + 7p per minute.	6:15		
10. I have £10. I buy 2 coffees at £2.89 each. How much do I have left?	6:6	20. What is the 10th term of this sequence? 3, 7, 11, 15, 19, ...	6:16		
Total (A)		Total (B)		Total (C)	
Test Total (A+B+C)		R (0-9)	Y (10-19)	G (20-25)	

Key Skills

Medium and Spicy

A: Place Value, Add, Subtract, Multiply and Divide		B: Fractions, Ratio, Proportion and Algebra		C: Measure and Problem Solving									
1. Write one million, five thousand, seven hundred and fifty two in digits.	6:1	11. Which is the largest fraction? $\frac{6}{10}$, $\frac{17}{30}$ or $\frac{33}{60}$	6:7	21. Name the shape: "I have 4 right angles and 2 pairs of equal sides".	6:24								
2. What is the value of the 9 in this number? 5,273,912	6:1	12. $\frac{9}{12} + \frac{1}{8} =$	6:8	22. The radius of a circle is 4.25cm. How long is the diameter ?	6:25								
3. Round 3,457,318 to the nearest hundred thousand .	6:1	13. Simplify your answer. $\frac{9}{16} \times \frac{2}{5} =$	6:9	23. Calculate the size of angles a and b . 	6:26								
4. To a number I add 13 then subtract 2 and get 3. What did I start with?	6:2	14. 3.5×10	6:10	24. Complete the line graph showing the height of a sunflower over time: <table border="1" data-bbox="1035 647 1370 703"><thead><tr><th>Day</th><th>5</th><th>6</th><th>7</th></tr></thead><tbody><tr><th>Height (cm)</th><td>43</td><td>52</td><td>59</td></tr></tbody></table> 	Day	5	6	7	Height (cm)	43	52	59	6:29
Day	5	6	7										
Height (cm)	43	52	59										
5. $6,149 \times 38$	6:3	15. 3.69×6	6:11										
6. Give your answer to the nearest whole number : $1,475 \div 32$	6:3	16. Write this percentage as a fraction and a decimal . 	6:12										
7. Which is a common multiple of 50 and 75? 25 100 150 200	6:4	17. Find 65% of 360.	6:13										
8. Circle all the prime numbers : 30 31 37 39	6:4	18. What is the scale factor ? 	6:14										
9. $28 \div 4 + 6 \times 3$	6:5	19. How long does a 5kg chicken take? 	6:15										
10. How much cheaper is a meal? 	6:6	20. What is the rule for this sequence? 1, 4, 13, 40, 121, ...	6:16	25. Find the mean of these numbers: 4 6 3 3 6 5 7 4 3 4	6:30								
Total (A)		Total (B)		Total (C)									
Test Total (A+B+C)		R (0-9)	Y (10-19)	G (20-25)									