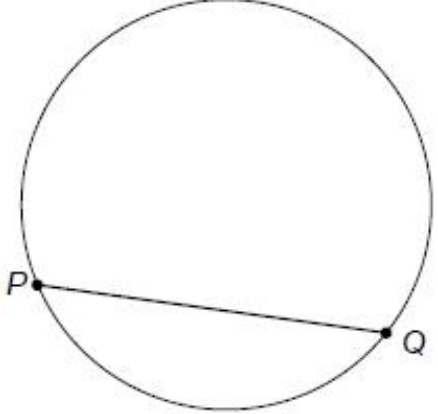


5-a-day Warm-Up

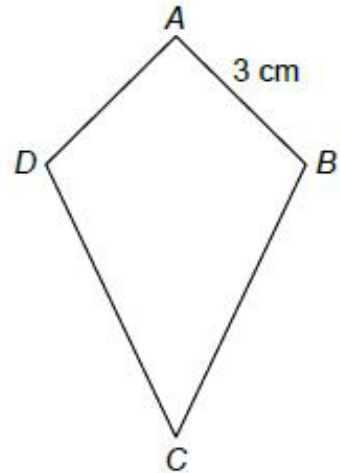
Warm-Up 1A

1.	Simplify $3 \times a \times 3 \times a$	2.	Write 0.19 as a fraction.	5.	Circle the word that describes the straight line PQ. 
3.	Write down the probability of rolling a 5 on an ordinary fair dice. Give your answer as a fraction.	4.	Convert 2.5 metres into centimetres.		

chord diameter
radius tangent

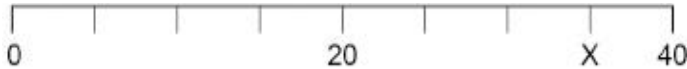
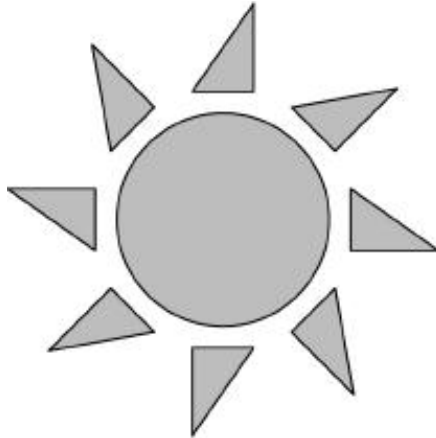
5-a-day Warm-Up

Warm-Up 2A

1.	Write $\frac{5}{8}$ as a decimal.	2.	Here are some numbers. 5 5 8 13 14 15 17 Work out the range.	5.	The perimeter of kite $ABCD$ is 24 cm  The length of side AB is 3 cm Work out the length of side CD .
3.	Factorise $5a + 10$	4.	Convert 680 millimetres into centimetres.		

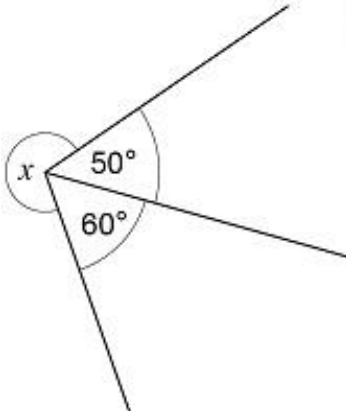
5-a-day Warm-Up

Warm-Up 3A

1.	A bag contains red counters and blue counters in the ratio 3 : 4 What fraction of the counters are red?	2.	Here is a number line.  What number is at X?	5.	Write down the order of rotational symmetry of this drawing. 
3.	Rearrange $p = r + 3$ to make r the subject.	4.	Here are some numbers. 3 4 6 6 7 8 9 13 Write down the mode.		

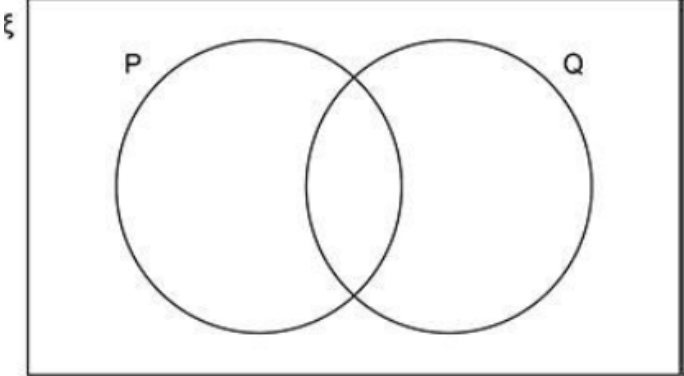
5-a-day Warm-Up

Warm-Up 4A

1.	Write a number in the box to make the calculation correct. $16 \div \square = 0.016$	2.	The probability of Heads when a biased coin is thrown is 0.6 The coin is thrown 500 times. Work out the expected number of Tails.	5.	Three straight lines meet at a point.  Not drawn accurately
3.	Write $\frac{7}{10}$ as a percentage.	4.	Multiply out $5(2a + 6)$		

5-a-day Warm-Up

Warm-Up 5A

1.	In a pie chart, one sector represents $\frac{1}{4}$ of the data. Work out the angle of that sector? Circle your answer. 4° 25° 45° 90°	2.	Work out the size of an exterior angle of a regular hexagon?	5.	On the Venn diagram, shade the section represented by $P \cap Q$ 
3.	How many minutes are there in $3\frac{1}{2}$ hours?	4.	Work out $\frac{2}{5}$ of 45		

5-a-day Warm-Up

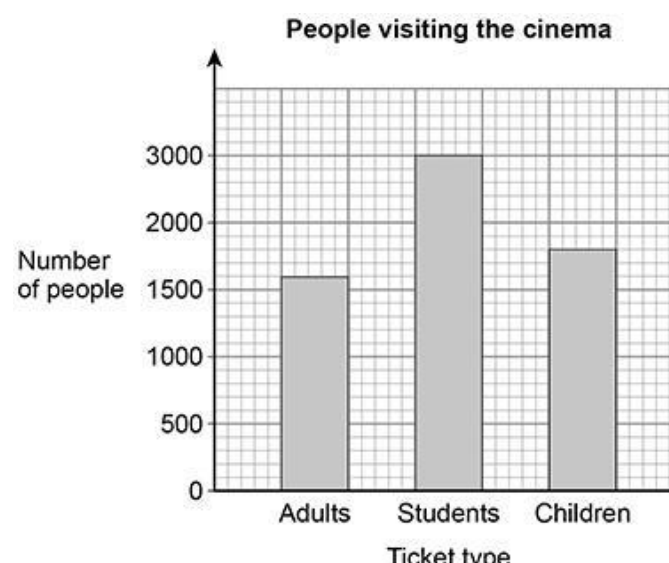


Warm-Up 6A

1.	Work out 30% of 150	2.	Ann and Bob share £140 in the ratio 2 : 3 Work out how much money Bob receives.	5.	Here is some information about the time spent on social media by 50 people. <table border="1"><thead><tr><th>Time, t minutes</th><th>Number of people</th></tr></thead><tbody><tr><td>$0 < t \leq 15$</td><td>2</td></tr><tr><td>$15 < t \leq 30$</td><td>9</td></tr><tr><td>$30 < t \leq 45$</td><td>31</td></tr><tr><td>$45 < t \leq 60$</td><td>8</td></tr></tbody></table> Work out the number of people who spent more than 30 minutes.	Time, t minutes	Number of people	$0 < t \leq 15$	2	$15 < t \leq 30$	9	$30 < t \leq 45$	31	$45 < t \leq 60$	8
Time, t minutes	Number of people														
$0 < t \leq 15$	2														
$15 < t \leq 30$	9														
$30 < t \leq 45$	31														
$45 < t \leq 60$	8														
3.	Simplify $8x - 3 + 6x + 1$	4.	In a triangle, two of the angles are 51° and 74° . Work out the size of the third angle.												

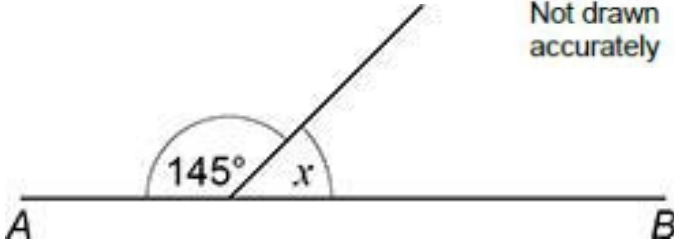
5-a-day Warm-Up

Warm-Up 7A

1.	Work out $4 + 3 \times 5 - 1$	2.	Write 18 as a percentage of 72	5.	A bar chart is drawn to show the number of people visiting a cinema one month.  Make one criticism of the bar chart.
3.	Two sides of a triangle have lengths 13 cm and 27 cm Which of these is a possible length of the other side? Circle your answer. 13 cm 14 cm 27 cm 40 cm	4.	y is 3 more than x . Write an equation for y in terms of x .		

5-a-day Warm-Up

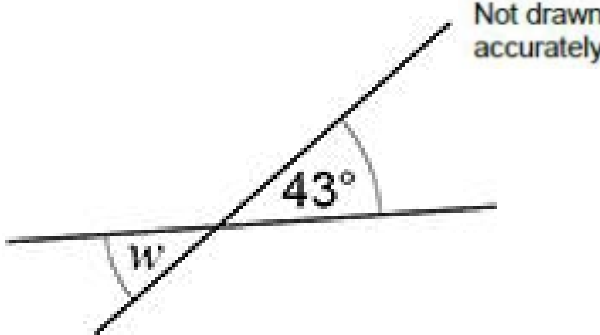
Warm-Up 8A

1.	Write 360 000 in standard form.	2.	Five cucumbers cost £6.40 in total. How much do two of these cucumbers cost?	5.	AB is a straight line.  Work out the size of angle x.
3.	Which one of the following is discrete data? Circle your answer. length of arm height of door number of pets mass of sugar	4.	Solve $\frac{x}{2} = 10$		

5-a-day Warm-Up



Warm-Up 9A

1.	Write these numbers in order starting with the smallest. 2.303 2.3 2.33 2.03	2.	Circle the expression that can be written as $3cd$ $3 + c + d$ $c + c + c + d$ $c \times c \times c \times d$ $3 \times c \times d$	5.	Here are two straight lines.  Write down the size of angle w .								
3.	An experiment has four outcomes. <table border="1" data-bbox="157 888 838 1046"><tr><td>Outcome</td><td>A</td><td>B</td><td>C</td><td>D</td></tr><tr><td>Probability</td><td>0.1</td><td></td><td>0.2</td><td>0.3</td></tr></table> Complete the table.	Outcome	A			B	C	D	Probability	0.1		0.2	0.3
Outcome	A	B	C	D									
Probability	0.1		0.2	0.3									

5-a-day Warm-Up

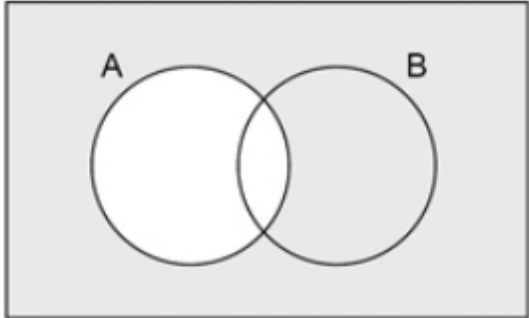


Warm-Up 10A

1.	Write 9.2×10^3 as an ordinary number.	2.	Circle the identity. $(x - 3)^2$ $(x - 3)^2 \equiv x^2 - 6x + 9$ $(x - 3)^2 > 5$ $(x - 3)^2 = 1 - 6x$	5.	Here is a frequency table for the times taken to solve a puzzle. <table><tr><th>Times, t (min)</th><th>Frequency</th></tr><tr><td>$0 < t \leq 1$</td><td>38</td></tr><tr><td>$1 < t \leq 2$</td><td>16</td></tr><tr><td>$2 < t \leq 3$</td><td>17</td></tr><tr><td>$3 < t \leq 4$</td><td>15</td></tr><tr><td>$4 < t \leq 5$</td><td>14</td></tr><tr><td colspan="2">Total = 100</td></tr></table> Which class interval contains the median?	Times, t (min)	Frequency	$0 < t \leq 1$	38	$1 < t \leq 2$	16	$2 < t \leq 3$	17	$3 < t \leq 4$	15	$4 < t \leq 5$	14	Total = 100	
Times, t (min)	Frequency																		
$0 < t \leq 1$	38																		
$1 < t \leq 2$	16																		
$2 < t \leq 3$	17																		
$3 < t \leq 4$	15																		
$4 < t \leq 5$	14																		
Total = 100																			
3.	Work out $\begin{pmatrix} 1 \\ 2 \end{pmatrix} + \begin{pmatrix} 4 \\ 6 \end{pmatrix}$	4.	Write $30 : 12$ in the form $n : 1$																

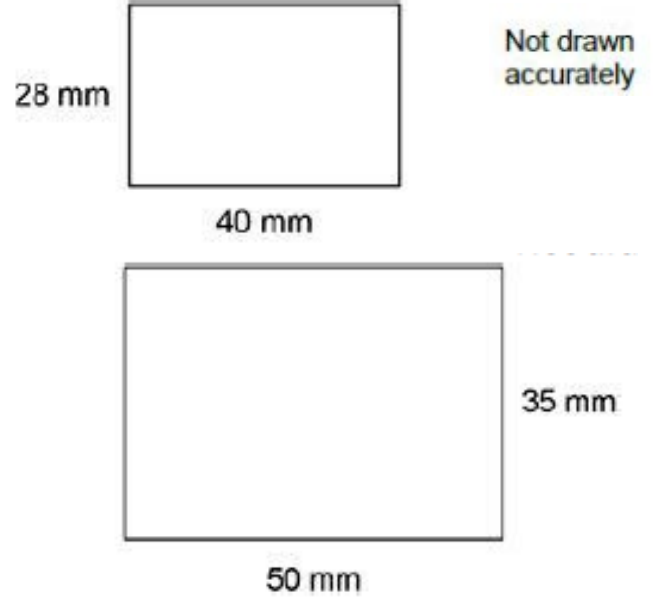
5-a-day Warm-Up

Warm-Up 11A

1.	a is two times b Write the ratio $a : b$	2.	Write $3\frac{2}{5}$ as an improper fraction.	5.	 Which of these represents the shaded region? Circle your answer. B $A' \cup B$ $A' \cap B$ A'
3.	Multiply out and simplify $(x - 1)^2$	4.	On a circle, which of these is always longer than the diameter? Circle your answer. chord arc radius circumference		

5-a-day Warm-Up

Warm-Up 12A

1.	The temperature was -11°C and increases by 5°C Work out the new temperature.	2.	Solve $3x + 2 = 14$	5.	Here are two rectangles.  Show that the rectangles are similar.
3.	The probability that A is the outcome of an experiment is 0.2 Write down the probability that A is not the outcome.	4.	A tennis player wins or loses matches in the ratio win : lose = 5 : 9 What fraction of the matches do they win?		

5-a-day Warm-Up

Warm-Up 13A

1. Write down a 3-digit square number less than 200

2. A spinner has ten sections, each labelled A, B, C or D.

	A	B	C	D
Probability	0.1	0.5	0.2	0.3

Give **one** reason why there **must** be a mistake in the table.

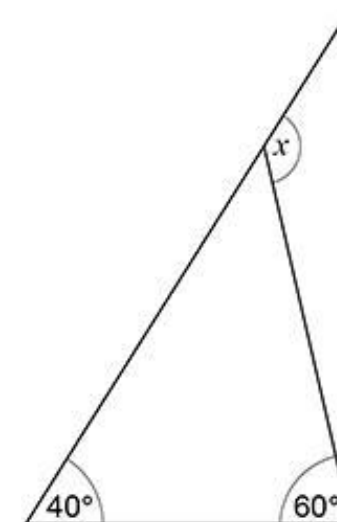
3. Factorise $21x + 28$

4. What does the longest bar in a bar chart represent?

Circle your answer.

mean median mode range

5. One side of a triangle is extended.



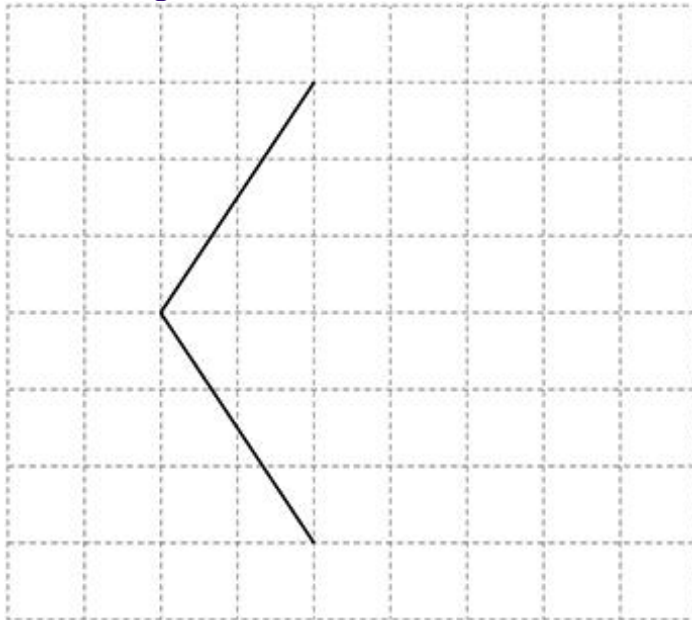
Not drawn accurately

Work out the size of angle x .

5-a-day Warm-Up

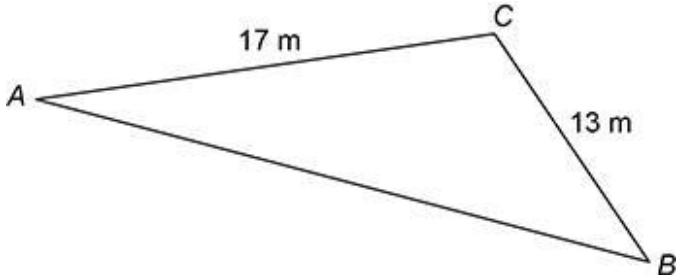


Warm-Up 14A

1.	Write a number in the box to make the calculation correct. $18.4 + 3.9 + \square = 27$	2.	An ordinary fair dice is thrown. Work out the probability of getting a number greater than 4.	5.	Two sides of a rhombus are drawn on this grid.  Complete the rhombus.
3.	Simplify $7x + 5 - 8 - 3x$	4.	Circle the shortest length. 1200 cm 0.13 km 110 m 140 000 mm		

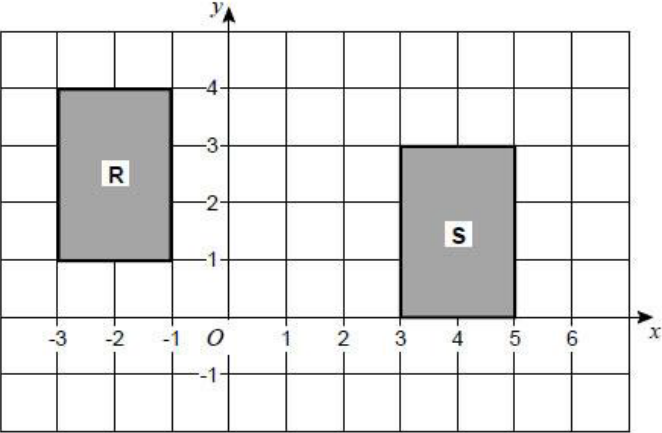
5-a-day Warm-Up

Warm-Up 15A

1.	Write down two numbers that are multiples of 3 and multiply to make 216	2.	Simplify $a^2 \times a^5$	5.	Here is a triangle. Not drawn accurately  Give a reason why the length of side AB cannot be 35 m
3.	Calculate $\sqrt[4]{20\,736}$	4.	Circle the decimal that has the same value as $\frac{3}{5}$ 0.06 0.35 0.6 3.5		

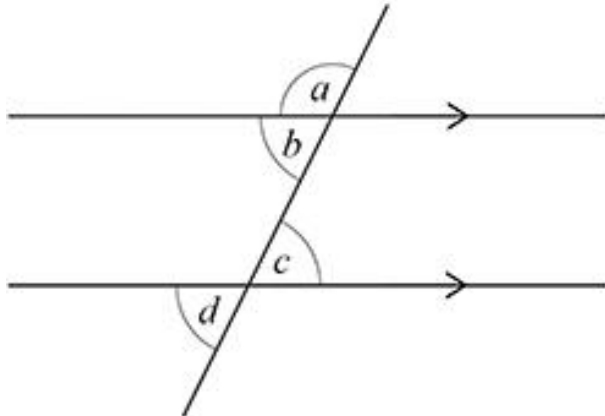
5-a-day Warm-Up

Warm-Up 16A

1.	Calculate $2^7 \times 5^2$	2.	Round 6.2847 to 2 decimal places.	5.	 Work out the vector that translates shape R to shape S. $\left(\quad \right)$
3.	Work out the value of $3x^2 + 1$ when $x = -4$	4.	A coin is thrown 50 times. The coin lands on heads 30 times. Write down the relative frequency of landing on heads.		

5-a-day Warm-Up

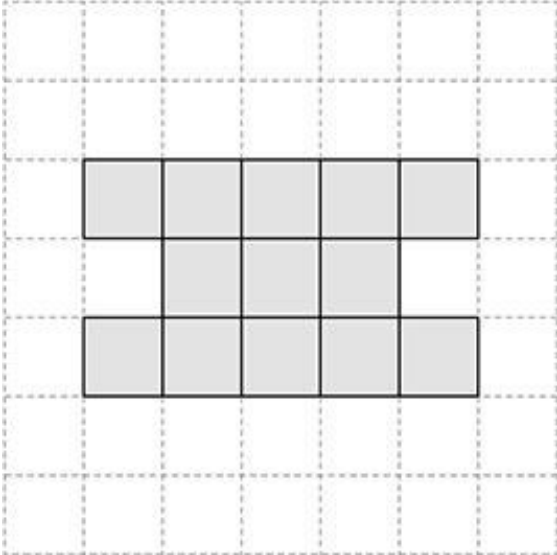
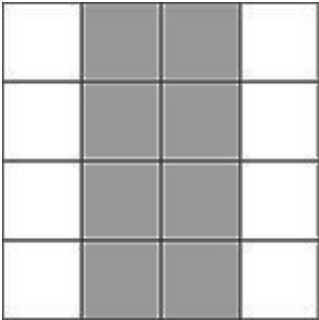
Warm-Up 17A

1.	Write a fraction in the box to make the calculation correct. $\frac{1}{2} \times \boxed{} = \frac{1}{8}$	2.	Write 0.12 as a fraction of 0.8	5.	 Circle the pair of alternate angles. <i>a</i> and <i>b</i> <i>b</i> and <i>c</i> <i>c</i> and <i>d</i> <i>a</i> and <i>d</i>
3.	Rearrange $p = \frac{w}{3}$ to make <i>w</i> the subject.	4.	An ordinary fair dice is rolled ten times. Here are the first nine results. 6 1 3 2 1 5 5 5 5 Write down the probability of getting a 5 on the tenth roll.		

5-a-day Warm-Up



Warm-Up 18A

1.	y is a whole number. Circle the words that describe $5y$ always odd always even could be odd or even	2.	Simplify $\frac{6w+10}{2}$	5.	Here is a pattern of squares on a grid. 
3.	What percentage of this grid is shaded? 	4.	$x = 2500$ to the nearest 100 Work out the smallest possible value of x.		Shade four more squares so that the pattern has rotational symmetry of order 4