

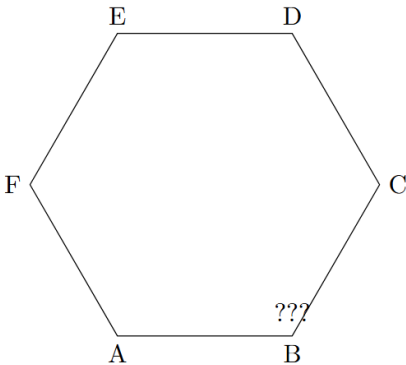
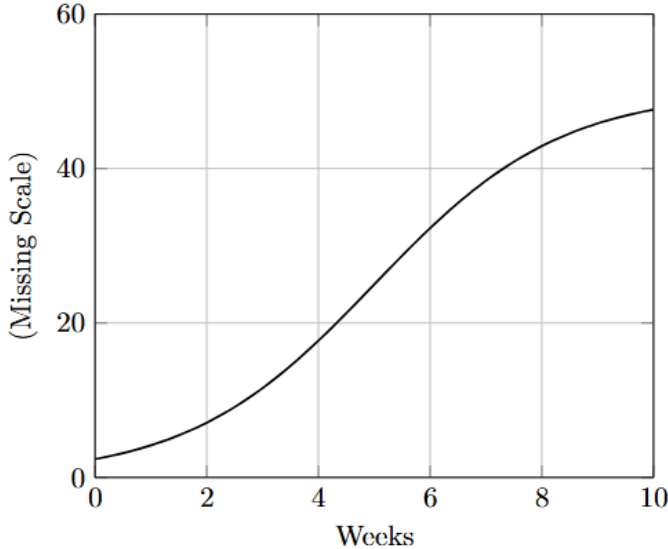
## Answer Sheet

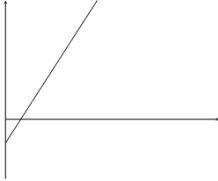
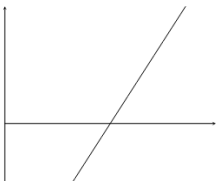
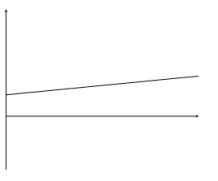
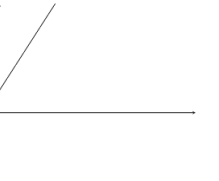
Circle one option (A, B, C or D) you select for the given question. Use a grey lead pencil only.

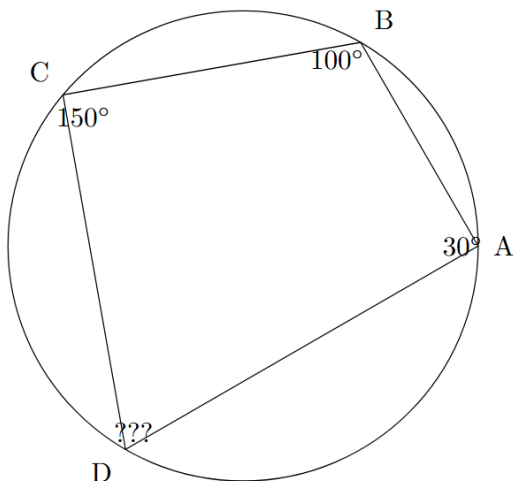
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39	A	B	C	D
40	A	B	C	D

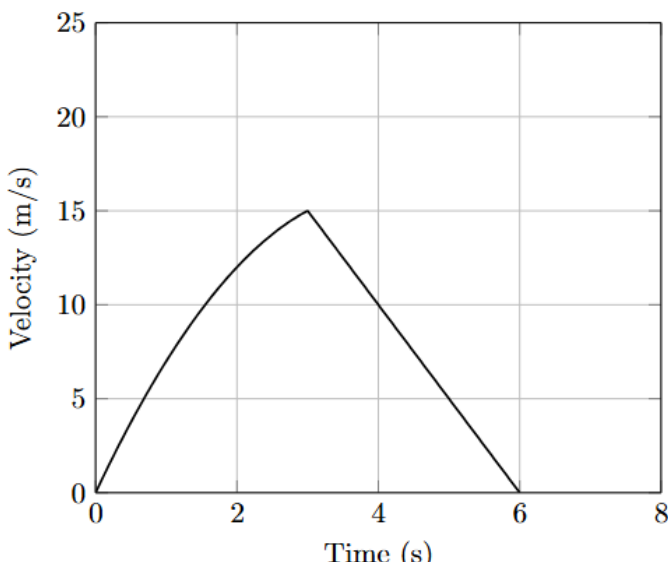
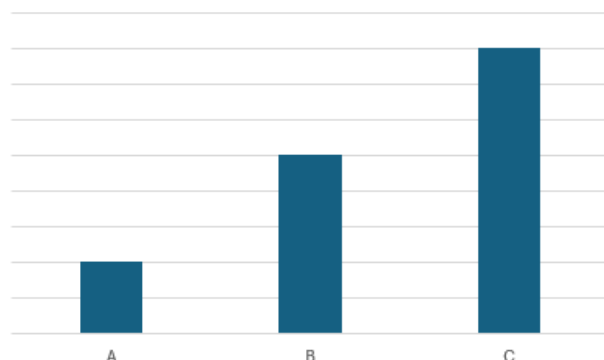
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60	A	B	C	D

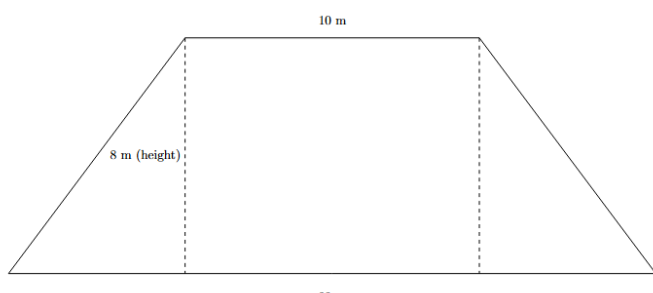
## Questions

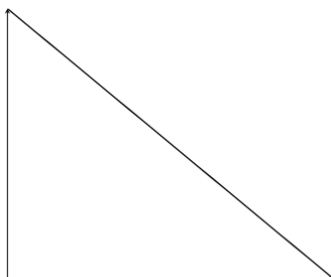
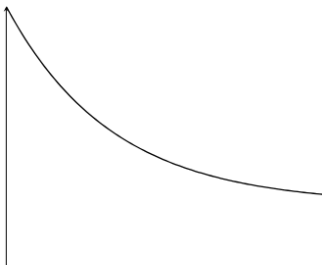
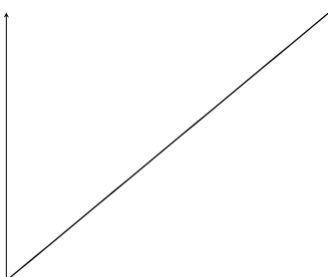
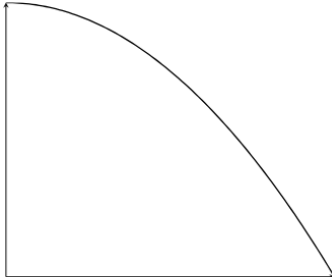
1	<p>A student claims they finished a 100 m race in exactly <math>\sqrt{10}</math> seconds. Which is the closest approximate time, and is <math>\sqrt{10}</math> rational or irrational?</p>	<p>(a) 3.16 s, irrational (b) 3.16 s, rational (c) 10.00 s, irrational (d) 31.62 s, rational</p>
2	<p>Rohan sees two rectangles in a park layout. The first is 10 m by 6 m. The second has width 6 m but unknown length (???). He suspects the rectangles may be congruent. Which of these would ensure the two rectangles are congruent?</p>	<p>(a) Its hypotenuse is 16cm (b) It has a perimeter of 35m (c) Two parallel sides are 6 metres (d) It has an area of 60m<sup>2</sup></p>
3	<p>Zahra is designing a tessellation with regular hexagons. She draws one regular hexagon ABCDEF with side length 3 cm. She forgot the measure of the interior angles (???).</p>  <p>She knows rotating or reflecting a regular hexagon should tile a plane. Which of these must be the measure of angle ABC?</p>	<p>(a) 135 degrees (b) 120 degrees (c) 108 degrees (d) 90 degrees</p>
4	<p>A family has \$27.50 to spend on snacks. They want to buy 8 identical snack boxes, using all their money if possible. What is the exact cost per box?</p>	<p>(a) \$3.45 (b) \$3.44 (c) \$3.4375 (d) \$3.35</p>
5	<p>A particular species of plant grows according to the graph shown. The exact scale on the vertical axis is partially erased.</p> 	<p>(a) The plant shrinks to zero. (b) The plant height increases initially, then flattens out. (c) The plant height increases indefinitely with no limit. (d) The plant only grows for the first week, then decreases.</p>

	Which statement best fits this shape?							
6	During a maths lesson, two groups create separate expressions for the total number of sweets they distributed. Group 1 wrote $(2x + 1)$ . Group 2 wrote $(x + 4)$ . The teacher wants them combined and multiplied by 4 (for 4 different classes). Which is the correct simplification for $4 \times [(2x + 1) + (x + 4)]$ ?	<b>(a)</b> $4(3x + 5) = 12x + 20$ <b>(b)</b> $4(2x + 1 + x + 4) = 4(2x + x + 1 + 4)$ <b>(c)</b> $4(2x + 1)(x + 4) = 8x^2 + 4$ <b>(d)</b> $3x + 5 \times 4 = 3x + 20$						
7	In a recipe, the ratio of sugar to flour is 2 : 3. If the recipe calls for 300 g of flour, how many grams of sugar are needed? Then the chef decides to reduce the sugar amount by __%, which results in only 160 g of sugar. What is that percentage reduction?	<b>(a)</b> 40% <b>(b)</b> 33% <b>(c)</b> 25% <b>(d)</b> 20%						
8	A landscaper calculates amounts of materials each week. The table shows an expression and a partially factorised form for Week 4: <div style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <table> <thead> <tr> <th>Week</th><th>Expression</th><th>Factorised (attempt)</th></tr> </thead> <tbody> <tr> <td>4</td><td><math>18x + 9</math></td><td><math>3(6x + 3)</math></td></tr> </tbody> </table> </div> Does $3(6x + 3)$ fully factor out the GCF leading to integers in the parentheses, and if not, what is the correct factorisation?	Week	Expression	Factorised (attempt)	4	$18x + 9$	$3(6x + 3)$	<b>(a)</b> Yes, $3(6x + 3)$ is fully factored <b>(b)</b> No, GCF is 6 so it should be $6(3x + 1.5)$ <b>(c)</b> No, GCF is 9 so it should be $9(2x + 1)$ <b>(d)</b> No, GCF is 18 so it should be $18(x + 0.5)$
Week	Expression	Factorised (attempt)						
4	$18x + 9$	$3(6x + 3)$						
9	A line has slope 4. It must pass through the midpoint of the points (2, -4) and (6, 8). Which final line is correct? <div style="display: flex; flex-wrap: wrap; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>(a) <math>y = 4x - 2</math></p> </div> <div style="text-align: center;">  <p>(b) <math>y = 4x - 14</math></p> </div> <div style="text-align: center;">  <p>(c) <math>y = \frac{x}{4} + 2</math></p> </div> <div style="text-align: center;">  <p>(d) <math>y = 4x + 2</math></p> </div> </div>	<b>Options are provided in the question.</b>						
10	Morgan designs a trapezium with one parallel side of 8 cm and the other parallel side of $x$ cm. Its height is 5 cm. The area is $65 \text{ cm}^2$ . Which value of $x$ satisfies this?	<b>(a)</b> 10 cm <b>(b)</b> 13 cm <b>(c)</b> 18 cm <b>(d)</b> 20 cm						
11	Referring to the below table, all four shows are planned to fill exactly 4 hours. What is Sh4's duration?	<b>(a)</b> 1 hr <b>(b)</b> 1 hr 5 min <b>(c)</b> 1 hr 10 min <b>(d)</b> 1 hr 15 min						

	<table><tr><th>Show</th><th>Duration (hours:minutes)</th></tr><tr><td>Sh1</td><td>1:10</td></tr><tr><td>Sh2</td><td>1:00</td></tr><tr><td>Sh3</td><td>0:40</td></tr><tr><td>Sh4</td><td>?</td></tr></table>	Show	Duration (hours:minutes)	Sh1	1:10	Sh2	1:00	Sh3	0:40	Sh4	?			
Show	Duration (hours:minutes)													
Sh1	1:10													
Sh2	1:00													
Sh3	0:40													
Sh4	?													
12	You cut a rope so that each cut halves a rope segment and when you cut 5 times, you ended up with 6 halves. This extra final cut is made for smoothing the ends. Let the total number of cuts be $m$ . If $m = 3$ , which fraction is correct?	<p>(a) <math>(\frac{1}{2})^{3+1} = (\frac{1}{2})^4 = \frac{1}{16}</math></p> <p>(b) <math>(\frac{1}{2})^3 = \frac{1}{8}</math></p> <p>(c) <math>(\frac{1}{2})^{2+3} = (\frac{1}{2})^5</math></p> <p>(d) <math>(\frac{1}{2})^{3-1} = (\frac{1}{2})^2 = \frac{1}{4}</math></p>												
13	<p>A catering company keeps track of main meals (M) and sides (S) in a function table for daily orders:</p> <table><tr><th>Day</th><th>M (mains)</th><th>S (sides)</th><th>Total Expression</th></tr><tr><td>Mon</td><td><math>3x + 2</math></td><td><math>2x - 1</math></td><td><math>(3x + 2) + (2x - 1)</math></td></tr><tr><td>Tue</td><td><math>4x - 3</math></td><td><math>x + 6</math></td><td>? (missing)</td></tr></table> <p>The total expression for Tuesday is missing. If we follow the same rule (total = M + S), which of these is the correct Tuesday total, then fully simplified?</p>	Day	M (mains)	S (sides)	Total Expression	Mon	$3x + 2$	$2x - 1$	$(3x + 2) + (2x - 1)$	Tue	$4x - 3$	$x + 6$	? (missing)	<p>(a) <math>(4x - 3)(x + 6) = 4x^2 + 21x - 18</math></p> <p>(b) <math>(4x - 3) + (x + 6) = 5x + 3</math></p> <p>(c) <math>(4x - 3) + (x + 6) = 5x + 9</math></p> <p>(d) <math>(4x - 3) + (x + 6) = 3x + 3</math></p>
Day	M (mains)	S (sides)	Total Expression											
Mon	$3x + 2$	$2x - 1$	$(3x + 2) + (2x - 1)$											
Tue	$4x - 3$	$x + 6$	? (missing)											
14	<p>Jacob is examining a cyclic quadrilateral.</p>  <p>Which of these is the measure of the missing angle?</p>	<p>(a) 60 degrees</p> <p>(b) 80 degrees</p> <p>(c) 90 degrees</p> <p>(d) Impossible to determine</p>												
15	A container can hold a maximum of 60 L of water. It currently contains: 25 L of water and 12 000 cm <sup>3</sup> of additional water that was poured in earlier. You then add 2 L more water. What is the final total, and will there be any overflow?	<p>(a) Final total = 37 L; No overflow</p> <p>(b) Final total = 39 L; No overflow</p> <p>(c) Final total = 60 L; No overflow</p> <p>(d) Final total = 62 L; Overflows by 2 L</p>												
16	A rectangular prism is 4 cm x 3 cm x 2 cm. If we keep two dimensions the same but halve the largest one, which new volume do we get?	<p>(a) 12cm<sup>3</sup></p> <p>(b) 6cm<sup>3</sup></p> <p>(c) 18cm<sup>3</sup></p> <p>(d) 24cm<sup>3</sup></p>												

17	<p>A car accelerates non-linearly from rest and then decelerates to a stop. The graph below shows its velocity (in m/s) over time (in s). Which option best describes this motion?</p> 	<p>(a) The car instantly reaches top speed and stays there.  (b) The car speeds up quickly, then slows down to a stop.  (c) The car's velocity is constant throughout the journey.  (d) The car reverses direction after 6 seconds.</p>
18	<p>A fair coin is flipped twice. The probability of getting no heads is <math>\frac{1}{4}</math>. Which of the following equals the probability of getting at least one head?</p>	<p>(a) <math>\frac{1}{4}</math>  (b) <math>\frac{1}{2}</math>  (c) <math>1 - \frac{1}{4}</math>  (d) <math>2 - \frac{1}{4}</math></p>
19	<p>A shipping label shows <math>30x - 15</math>. The label is partially smeared. The instructions say: "Factor out the greatest integer factor." Which factorisation is correct?</p>	<p>(a) <math>15(2x - 1)</math>  (b) <math>30(x - 0.5)</math>  (c) <math>10(3x - 1.5)</math>  (d) <math>5(6x + 3)</math></p>
20	<p style="text-align: center;">Sales</p>  <p>A bar chart shows the sales of three products in dollars. Product A's bar on the chart is incorrectly displaying and Product B's bar is \$50 while Product C is \$80. If the bar for Product B is exactly 25% higher than Product A, what is the missing value for Product A's sales?</p>	<p>(a) \$20  (b) \$30  (c) \$40  (d) \$50</p>
21	<p>Which of the following best describes a census in data collection?</p>	<p>(a) Surveying a random group of people  (b) Surveying every member of the population  (c) Observing only outliers in the population  (d) Recording data from the nearest volunteers</p>

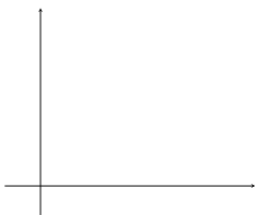
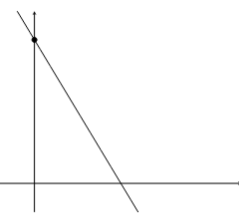
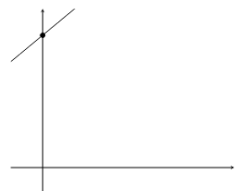
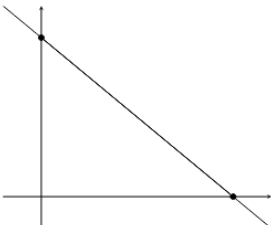
22	<p>A teacher has quiz scores out of 10 for 8 students. One student's score is missing. The mean of the 8 scores is exactly 7. What is the missing score?</p> <table><tr><th>Student</th><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td></tr><tr><th>Score</th><td>9</td><td>7</td><td>8</td><td>5</td><td>6</td><td>10</td><td>6</td><td>?</td></tr></table>	Student	1	2	3	4	5	6	7	8	Score	9	7	8	5	6	10	6	?	<p>(a) 4 (b) 5 (c) 7 (d) 8</p>
Student	1	2	3	4	5	6	7	8												
Score	9	7	8	5	6	10	6	?												
23	<p>The cross-section of a prism is a trapezium with parallel sides of 4 cm and 2 cm and a perpendicular height of 2 cm. The depth of the prism is 5 cm. If the longer base was increased from 4 cm to 6 cm, find the new volume.</p>	<p>(a) 50cm<sup>3</sup> (b) 30cm<sup>3</sup> (c) 45cm<sup>3</sup> (d) 40cm<sup>3</sup></p>																		
24	<p>A spinner with 4 equal sections (A, B, C, D) is spun once. X = “landing on A or B.” Y = “landing on B or C” Find P(X exclusive or Y), i.e. exactly one of X or Y occurs.</p>	<p>(a) 1/2 (b) 1/4 (c) 3/4 (d) 1/8</p>																		
25	<p>Four classmates each read for some fraction of an hour on a particular day. Sasha wants the total reading time to be 4 hours across all four. Three classmates' reading times are shown (in mixed fractions or decimals), and the fourth is missing. If the total reading time for all four is exactly 4 hours, which fraction of an hour did Dev read?</p> <table><tr><th>Name</th><th>Reading Time</th></tr><tr><td>Alex</td><td><math>\frac{3}{4}</math> hour (0.75 hr)</td></tr><tr><td>Bryony</td><td><math>1\frac{1}{4}</math> hours (1.25 hr)</td></tr><tr><td>Cindy</td><td><math>\frac{2}{3}</math> hour (~0.67 hr)</td></tr><tr><td>Dev</td><td>?</td></tr></table>	Name	Reading Time	Alex	$\frac{3}{4}$ hour (0.75 hr)	Bryony	$1\frac{1}{4}$ hours (1.25 hr)	Cindy	$\frac{2}{3}$ hour (~0.67 hr)	Dev	?	<p>(a) <math>\frac{5}{4}</math> hours (b) <math>\frac{7}{6}</math> hours (c) <math>\frac{4}{3}</math> hours (d) <math>\frac{3}{2}</math> hours</p>								
Name	Reading Time																			
Alex	$\frac{3}{4}$ hour (0.75 hr)																			
Bryony	$1\frac{1}{4}$ hours (1.25 hr)																			
Cindy	$\frac{2}{3}$ hour (~0.67 hr)																			
Dev	?																			
26	<p>Helen measures a trapezium-shaped garden bed. The parallel edges are 22 m and 10 m, and the perpendicular height is 8 m. What is the area of this trapezium in square metres?</p> 	<p>(a) 88 m<sup>2</sup> (b) 128 m<sup>2</sup> (c) 176 m<sup>2</sup> (d) 256 m<sup>2</sup></p>																		
27	<p>Selena's test mark M depends on hours studied h in two steps, plus an extra detail: She starts at 40 marks without study (base mark) and for each hour of study adds 5 marks. A “participation bonus” adds 3 more marks for every hour studied. Which linear equation for M in terms of h matches this situation?</p>	<p>(a) M = 3h + 5h - 40 (b) M = 40 - 5h (c) M = 5h + 40 (d) M = 8h + 40</p>																		
28	<p>A poll of 45 students records whether they prefer eBooks or not, and paper books or not. The table:</p>	<p>(a) 2/9 (b) 4/15 (c) 4/9 (d) 1/3</p>																		

	<table><tr><th></th><th>eBooks</th><th>No eBooks</th><th>Total</th></tr><tr><td>Paper Books</td><td>12</td><td>?</td><td>20</td></tr><tr><td>No Paper Books</td><td>?</td><td>7</td><td>?</td></tr><tr><td>Total</td><td>30</td><td>15</td><td>45</td></tr></table> <p>What is the probability that a randomly chosen student prefers both eBooks and paper books?</p>		eBooks	No eBooks	Total	Paper Books	12	?	20	No Paper Books	?	7	?	Total	30	15	45	
	eBooks	No eBooks	Total															
Paper Books	12	?	20															
No Paper Books	?	7	?															
Total	30	15	45															
29	A ball is thrown from a platform that is 5 metres above the ground. Its height $H$ (in metres) at time $t$ (in seconds) is described by: $H(t) = -t^2 + 4t + 5$ . We assume no air resistance and the ball eventually lands on the ground, where $H = 0$ . At what time does the ball land on the ground?	(a) It lands exactly 1 second after being thrown. (b) It lands exactly 4 seconds after being thrown. (c) It lands exactly 5 seconds after being thrown. (d) The ball never reaches the ground.																
30	A bus departs at 11:50 PM on Friday for a 2-hour 20-minute journey. However, after driving 1 hour, it stops for a scheduled 10-minute break (this break is already included in the total journey time quoted). What is the arrival time (and day) in 24-hour format?	(a) 02:10 Friday (b) 02:20 Saturday (c) 02:10 Saturday (d) 02:20 Sunday																
31	A candle burns in such a way that its height decreases quickly at first and then more slowly. Which graph best illustrates the candle's height over time? <div><div><p>(a)</p></div><div><p>(b)</p></div><div><p>(c)</p></div><div><p>(d)</p></div></div>	Options are provided in the question.																
32	You paint a circular region of $72 \text{ cm}^2$ exactly. The area formula is $\pi r^2 = 72$ . Which statement is correct about $r$ ?	(a) $r = \sqrt{72/\pi}$ , which is irrational (b) $r = \sqrt{72} \approx 8.49$ , so rational (c) $r = 72/\pi \approx 22.91$ , so irrational (d) $r = \sqrt{36/\pi} \approx 3.38$ , so irrational																
33	You have a uniform rope. The rope's linear burn rate is 1 cm per minute if you burn it from one end only. If you ignite it	(a) 15 cm (b) 90 cm (c) 60 cm																

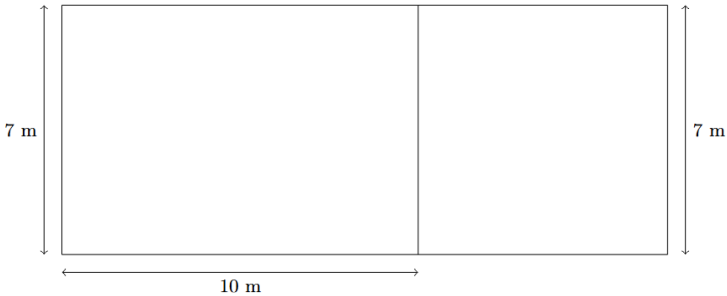
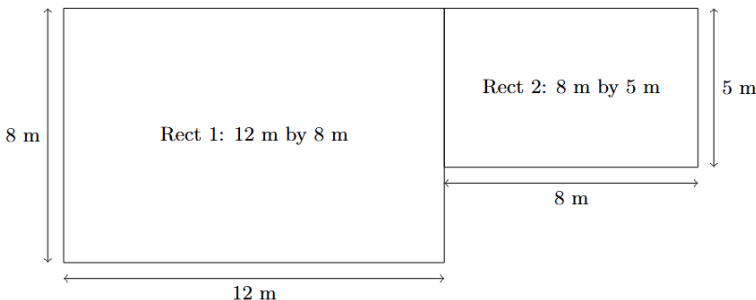
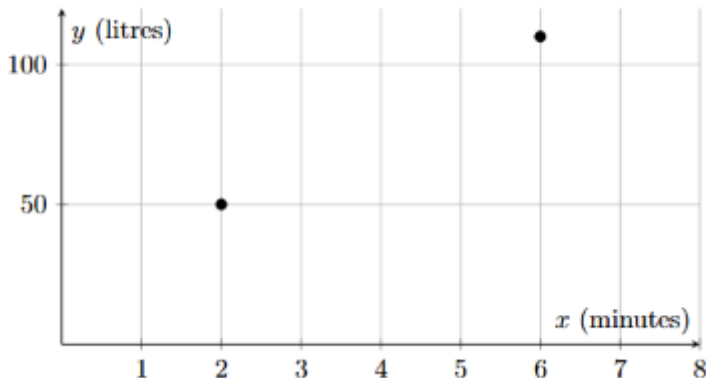
	simultaneously from both ends, it burns uniformly from each side completely in 30 minutes. What is the total length of the rope?	(d) 30 cm																									
34	<p>Over six days, the recorded high temperatures (in °C) are as follows: 12, 14, 10, 13, 15, and 0. However, the Day 6 reading might be a mistake; someone suspects it should have been 10 °C, not 0 °C. What is the range if Day 6 is 0 °C, and what would it be if the actual value was 10 °C?</p> <table><tr><th>Day</th><th>Temperature (°C)</th></tr><tr><td>1</td><td>12</td></tr><tr><td>2</td><td>14</td></tr><tr><td>3</td><td>10</td></tr><tr><td>4</td><td>13</td></tr><tr><td>5</td><td>15</td></tr><tr><td>6</td><td>0 (suspected error)</td></tr></table>	Day	Temperature (°C)	1	12	2	14	3	10	4	13	5	15	6	0 (suspected error)	(a) 15 when it's 0 °C, and 5 if it was 10 °C (b) 10 when it's 0 °C, and 5 if it was 10 °C (c) 15 when it's 0 °C, and 7 if it was 10 °C (d) The range doesn't change											
Day	Temperature (°C)																										
1	12																										
2	14																										
3	10																										
4	13																										
5	15																										
6	0 (suspected error)																										
35	<p>A volunteer group has a total of <math>6^{3+2}</math> small presents ready to distribute to children in a shelter. However, before distribution, they set aside <math>6^3</math> of these presents to keep in the main office. The remaining presents are then divided equally among 72 children. How many presents does each of the 72 children receive?</p>	(a) 36 (b) 105 (c) 108 (d) 112																									
36	<p>A teacher surveys 36 students on whether they like Maths or English. The teacher also knows that the total number of students that like Maths is 22. The teacher has partially completed the table:</p> <table><tr><th></th><th>Likes Maths</th><th>Does not like Maths</th><th>Total</th></tr><tr><td>Likes English</td><td>15</td><td>?</td><td>20</td></tr><tr><td>Does not like Eng.</td><td>?</td><td>?</td><td>?</td></tr><tr><td>Total</td><td>?</td><td>?</td><td>36</td></tr></table> <p>What is the probability that a randomly chosen student likes neither Maths nor English?</p>		Likes Maths	Does not like Maths	Total	Likes English	15	?	20	Does not like Eng.	?	?	?	Total	?	?	36	(a) $\frac{5}{36}$ (b) $\frac{7}{36}$ (c) $\frac{1}{4}$ (d) $\frac{9}{3.6}$									
	Likes Maths	Does not like Maths	Total																								
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37	<p>A grocery store overseas applies a 10% discount on one of the vegetable purchases. The table lists each vegetable's cost per kg, the quantity bought, and the final cost after discount (if any). One entry is missing. Which is the correct final cost of the onions?</p> <table><tr><th>Vegetable</th><th>Cost per kg (USD)</th><th>Quantity (kg)</th><th>Discount</th><th>Final Cost (USD)</th></tr><tr><td>Carrots</td><td>2.00</td><td>2.0</td><td>None</td><td>4.00</td></tr><tr><td>Onions</td><td>2.40</td><td>1.5</td><td>10%</td><td>?</td></tr><tr><td>Potatoes</td><td>1.50</td><td>1.0</td><td>None</td><td>1.50</td></tr><tr><td>Broccoli</td><td>2.00</td><td>1.0</td><td>None</td><td>2.00</td></tr></table>	Vegetable	Cost per kg (USD)	Quantity (kg)	Discount	Final Cost (USD)	Carrots	2.00	2.0	None	4.00	Onions	2.40	1.5	10%	?	Potatoes	1.50	1.0	None	1.50	Broccoli	2.00	1.0	None	2.00	(a) \$2.40 (b) \$2.16 (c) \$3.60 (d) \$3.24
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38	Which index notation correctly factorises 144?	(a) $2^3 \times 3^3$																									



		<p>(b) <math>2^4 \times 3^2</math> (c) <math>2^2 \times 3^4</math> (d) <math>2^5 \times 3</math></p>																
39	<p style="text-align: center;"><b>Output</b></p> <p>A factory's line graph (not to scale) shows daily output over two consecutive Monday–Friday weeks. On Friday of Week 1, the factory produced 60 units. On Monday of Week 2, production fell by ___% from Friday's output, giving only 48 units. By Friday of Week 2, the factory recovered, and output reached 20% above the previous Friday's 60 units. How many units were produced on Friday of Week 2?</p>	<p>(a) Missing % = 10%; Friday of Week 2 = 66 units (b) Missing % = 20%; Friday of Week 2 = 66 units (c) Missing % = 20%; Friday of Week 2 = 72 units (d) Missing % = 25%; Friday of Week 2 = 72 units</p>																
40	<p>Rebecca wrote "<math>6x + 9 = 3(2x + 3)</math>." Kim claimed that was incomplete. The teacher asked them to "test" the factorisation by expansion. Which statement is correct?</p>	<p>(a) <math>3(2x + 3)</math> re-expands to <math>6x + 9</math>, so it is fully factored (b) <math>3(2x + 3)</math> is correct but not fully factorised because GCF is 9 (c) The correct factorisation is <math>6(x + 1.5)</math> (d) <math>3(2x + 3)</math> gives <math>6x + 3</math></p>																
41	<p>A teacher records seven students' test scores out of 20. One score is much higher than the rest:</p> <table><tr><th>Student</th><th>A</th><th>B</th><th>C</th><th>D</th><th>E</th><th>F</th><th>G</th></tr><tr><td>Score</td><td>7</td><td>8</td><td>8</td><td>9</td><td>9</td><td>10</td><td>19</td></tr></table> <p>Sorted, the scores are 7, 8, 8, 9, 9, 10, 19. The median of all 7 values is 9 (the 4th value). The teacher considers removing the outlier (19) to see the new median of the remaining 6 scores. What is the new median if we remove the outlier?</p>	Student	A	B	C	D	E	F	G	Score	7	8	8	9	9	10	19	<p>(a) 7 (b) 8 (c) 8.5 (d) 9</p>
Student	A	B	C	D	E	F	G											
Score	7	8	8	9	9	10	19											
42	<p>A chef mixes apple, orange, and pineapple juices in the ratio 2 : 1 : 3, making a total of 36 cups of juice. The table shows how many cups of each juice, but the combined total for Orange + Pineapple is missing. How many total cups of Orange + Pineapple are used together?</p>	<p>(a) 16 (b) 18 (c) 20 (d) 24</p>																

	<table border="1"> <thead> <tr> <th>Juice Type</th><th>Ratio</th><th>Cups Used</th></tr> </thead> <tbody> <tr> <td>Apple</td><td>2</td><td>12</td></tr> <tr> <td>Orange</td><td>1</td><td>6</td></tr> <tr> <td>Pineapple</td><td>3</td><td>18</td></tr> <tr> <td>Orange + Pineapple</td><td>?</td><td>?</td></tr> <tr> <td><b>Total</b></td><td>6</td><td>36</td></tr> </tbody> </table>	Juice Type	Ratio	Cups Used	Apple	2	12	Orange	1	6	Pineapple	3	18	Orange + Pineapple	?	?	<b>Total</b>	6	36	
Juice Type	Ratio	Cups Used																		
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Orange + Pineapple	?	?																		
<b>Total</b>	6	36																		
43	A train has a scheduled timetable between Station A, Station B, and Station C: Travel time from B to C: 20 minutes. Scheduled departure from A: 09:15. Travel time from A to B: 25 minutes. Dwell time (waiting) at B: 15 minutes. One day, the train departed A 10 minutes late. You want to find the actual arrival time at C that day.	<b>(a)</b> 10:15 <b>(b)</b> 10:20 <b>(c)</b> 10:25 <b>(d)</b> 10:30																		
44	Yara computes the total cost of buying notebooks and markers. She writes the expression: $3(2x + 4) + 5x$ but forgets to simplify it. What is its simplified form?	<b>(a)</b> $11x + 12$ <b>(b)</b> $11x$ <b>(c)</b> $6x + 12 + 5x - 1$ <b>(d)</b> $6x + 12$																		
45	A small bakery bakes bread with two different rates: (1) For the first 2 hours, the bakery produces 12 loaves/hour. (2) For the next hours, it produces 15 loaves/hour. After 5 hours, how many loaves have been baked in total?	<b>(a)</b> 60 <b>(b)</b> 69 <b>(c)</b> 72 <b>(d)</b> 75																		
46	<p>A line is described as "the sum of x and y coordinates is always 5." Which equation/graph does that correspond to?</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>(a) <math>y = -x - 5</math></p> </div> <div style="text-align: center;">  <p>(b) <math>y = -2x + 5</math></p> </div> </div> <div style="display: flex; justify-content: space-around; align-items: flex-start; margin-top: 20px;"> <div style="text-align: center;">  <p>(c) <math>y = x + 5</math></p> </div> <div style="text-align: center;">  <p>(d) <math>y = -x + 5</math></p> </div> </div>	Options are provided in the question.																		
47	A right-angled triangular prism has legs 4 cm and 3 cm. The hypotenuse is unknown. The depth is 6 cm. What is its volume?	<b>(a)</b> $24 \text{ cm}^3$ <b>(b)</b> $26 \text{ cm}^3$ <b>(c)</b> $32 \text{ cm}^3$ <b>(d)</b> $36 \text{ cm}^3$																		

48	<p>A music streaming app categorises 50 songs as Pop or Rock, and Short or Long. The table:</p> <table><tr><th></th><th>Short</th><th>Long</th><th>Total</th></tr><tr><td>Pop</td><td>?</td><td>18</td><td>30</td></tr><tr><td>Rock</td><td>13</td><td>?</td><td>?</td></tr><tr><td>Total</td><td>?</td><td>?</td><td>50</td></tr></table> <p>What is the probability that a randomly chosen song is neither Rock nor Long?</p>		Short	Long	Total	Pop	?	18	30	Rock	13	?	?	Total	?	?	50	<p>(a) 12/50 (b) 25/50 (c) 18/50 (d) 6/25</p>
	Short	Long	Total															
Pop	?	18	30															
Rock	13	?	?															
Total	?	?	50															
49	<p>Amy begins streaming a series of shows at 23:10 (11:10 PM) on Thursday. She watches: Show A: lasts 1 hour 20 minutes (80 min), Then takes a 15-minute break, Show B: whose length is unknown, And finishes exactly at 02:05 (2:05 AM) on Friday. What is the duration of Show B?</p>	<p>(a) 60 minutes (b) 70 minutes (c) 75 minutes (d) 80 minutes</p>																
50	<p>A company installs solar cells in phases. Initially, there are <math>3^2</math> cells (that's 9). After <math>p</math> phases, the total is <math>9 \times 3^{p+1}</math>. Since <math>9 = 3^2</math>, rewrite:</p> $9 \times 3^{p+1} = (3^2) \times 3^{p+1} = 3^{2+(p+1)}$ <p>Which is the simplified exponent after you complete the figure represented by the question mark?</p>	<p>(a) <math>3^{p+3}</math> (b) <math>3^{p+2}</math> (c) <math>3^{p-2}</math> (d) <math>3^{2p+1}</math></p>																
51	<p>A novelty toy store displays a large, dramatic "BUY 2 BUNDLES!" sign. Each bundle is described:</p> <div><div><p><b>Bundle 1</b></p><p><math>(x + 6)(x - 2)</math> items</p></div><div><p><b>Bundle 2</b></p><p><math>(2x + 1)(x + 3)</math> items</p></div></div> <p>Which is the correct combined expression if the store literally adds those two products together without factoring anything out first?</p>	<p>(a) <math>(x + 6 + x - 2) + (2x + 1 + x + 3)</math> (b) <math>(x + 6)(x - 2)(2x + 1)(x + 3)</math> (c) <math>(x + 6) + (x - 2) + (2x + 1) + (x + 3)</math> (d) <math>(x + 6)(x - 2) + (2x + 1)(x + 3)</math></p>																
52	<p>Sam wants to find out how many hours of TV teenagers watch in his city. He stands outside a cinema and surveys the first 30 teenagers who walk out. Which sampling method has Sam used?</p>	<p>(a) Random sampling (b) Convenience sampling (c) Census (d) Stratified sampling</p>																
53	<p>A gardener looks at the expression <math>6x^2 - 24</math> related to a landscaping project but wants it factorised fully. Which factorisation is correct?</p>	<p>(a) <math>6(x^2 - 2)</math> (b) <math>6(x - 2)(x + 2)</math> (c) <math>2(3x^2 - 12)</math> (d) <math>6(x^2 + 4)</math></p>																
54	<p>A shape is made by joining a rectangle (length 10 m, width 7 m) and a square (side 7 m) along one side. The missing perimeter was not recorded. What is the total external perimeter of this combined shape?</p>	<p>(a) 34m (b) 38m (c) 44m (d) 48m</p>																

		
55	<p>A teacher draws two circles on the board for an art project. The difference in their diameters is exactly 2 cm. The smaller circle has a circumference of <math>6\pi</math> cm. The teacher wants to know the circumference of the larger circle.</p>	<p>(a) <math>7\pi</math>  (b) <math>7.2\pi</math>  (c) <math>8\pi</math>  (d) <math>8.5\pi</math></p>
56	<p>A farmer has an L-shaped field composed of two rectangles: Rectangle 1: 12 m by 8 m &amp; Rectangle 2: 8 m by 5 m. He lines them up so that the width of 5 m is shared. The total area was left blank. Which is the total area of the L-shaped field?</p> 	<p>(a) <math>96 \text{ m}^2</math>  (b) <math>100 \text{ m}^2</math>  (c) <math>136 \text{ m}^2</math>  (d) <math>156 \text{ m}^2</math></p>
57	<p>Jasmine has a rectangular garden with a perimeter of 46 metres. She remembers that the length is exactly 5 metres more than the width, but she forgot the dimensions. What is the area of the garden in square metres?</p>	<p>(a) 126  (b) 130  (c) 140  (d) 150</p>
58	<p>A water tank is filled at a steady (linear) rate. The graph below shows two measurements: (2, 50) and (6, 110), where <math>x</math> is time in minutes (since the filling started) and <math>y</math> is the volume of water (in litres) in the tank.</p>  <p>From these two measurements, the manager asserts the tank is filling along a straight line. Suppose the tank had <math>y</math> litres at time <math>x</math></p>	<p>(a) <math>y = 10x + 30</math>  (b) <math>y = 10x + 20</math>  (c) <math>y = 15x + 20</math>  (d) <math>y = 15x + 10</math></p>

	minutes, following an equation $y = mx + b$ . Which of the following best represents the correct linear equation?	
<b>59</b>	In triangle ABC, angle B is twice as large as angle A, and angle C is 10 degrees larger than angle B. Which of the following is the measure of angle C?	<b>(a)</b> $64^\circ$ <b>(b)</b> $68^\circ$ <b>(c)</b> $78^\circ$ <b>(d)</b> $80^\circ$
<b>60</b>	Thomas has a bag containing 30 marbles: red, green, and blue. He knows the following: (1) The number of green marbles is exactly 3 more than the number of red marbles. (2) The number of blue marbles is exactly 12 more than the number of red marbles. Thomas forgot how many red marbles there are. Which of the following is the correct number of red marbles?	<b>(a)</b> 4 <b>(b)</b> 5 <b>(c)</b> 6 <b>(d)</b> 7