

Year 8 Maths Practice Paper 3

This paper covers: Multiply and divide fractions, Percentages, Algebraic manipulation, Coordinates and graphs, Graphs and charts, Tables and probability, Ratio, Symmetry and reflection, Area, volume and density, Angles in parallel lines and polygons, Circles.

TIME ALLOWED
45 minutes
TOTAL MARKS
36
QUESTIONS
24

Name _____

Class _____ Date _____

INSTRUCTIONS

- Use black ink or a black ball-point pen.
- Answer every question in the space given.
- You may use a calculator.
- Show your working. Some marks are given for a correct method, even when the answer is wrong.

INFORMATION

- The marks for each question are shown in brackets, for example [1 mark].
- The questions start easier and get harder as you go.
- Diagrams are not drawn accurately unless the question says so.
- Check your answers if you have time at the end.

FOR THE MARKER

Score _____ **out of 36**

Percentage _____ %

01 Questions

Answer every question. Show your working.

1 Simplify $4x + 5 + x + 5$.

[1 mark]

ANSWER

2 A row has 3 pictures and each picture stands for 5. How many does the row show?

[1 mark]

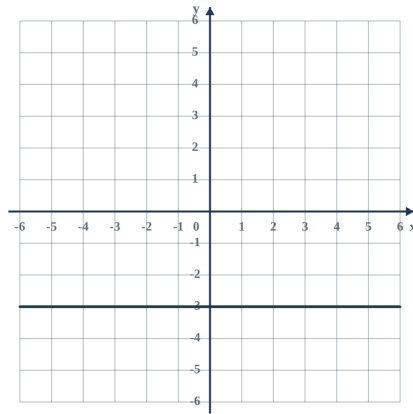
ANSWER

3 Increase 240 by 10%.

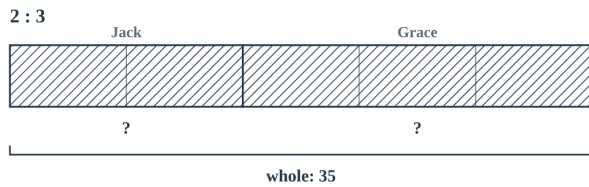
[1 mark]

ANSWER

- 4 What is the equation of the line drawn on the grid? Circle your answer. [1 mark]
- ☐ $y = 3$ ☐ $y = -3$ ☐ $x = -3$



- 5 The whole bar is 35. What is one part worth? [1 mark]



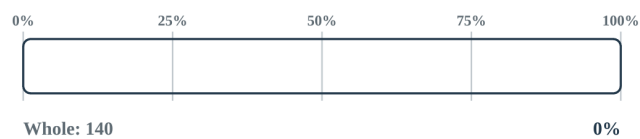
ANSWER

- 6 The number line is marked in fifths. How many fifths are there in 3 whole ones? [1 mark]

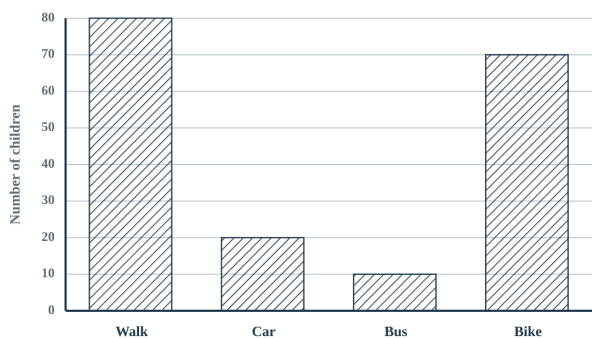


ANSWER

- 7 An amount of 140 is decreased by 30%. Slide the fill to show the 30% that is taken off. Write the value the slider should show. [1 mark]



- 8 The chart shows how children travel to school. How many children chose Walk? [1 mark]



ANSWER

- 9 A solid has six rectangular faces in three matching pairs. What is it called? Circle your answer. [1 mark]

☐ cone

☐ square-based pyramid

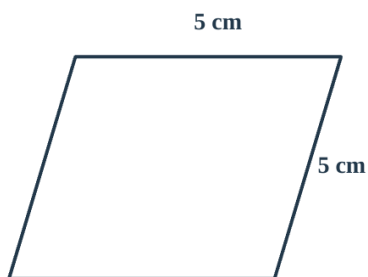
☐ triangular prism

☐ cuboid

- 10 The table for $y = 2x + 3$ has x values 0, 1, 2, 3 and y values 3, 5, ?, 9. What is the missing y value? [1 mark]

ANSWER

- 11 This parallelogram has an area of 15 square centimetres and a base of 5 centimetres. What is its perpendicular height in centimetres? [1 mark]



perpendicular height ? cm

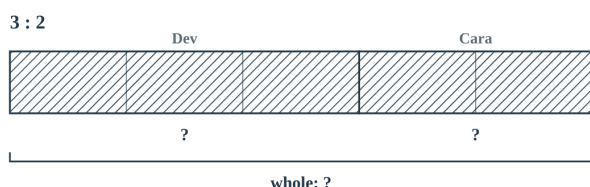
ANSWER

- 12** A 4-sided spinner was spun 40 times. What is the relative frequency of a 3? Give a fraction in its simplest form. Write your answer as a fraction. [1 mark]

Score	Frequency
1	11
2	10
3	10
4	9

ANSWER

- 13** Dev and Cara share some money in the ratio 3 : 2. Dev gets 4 g more than Cara. How much does Cara get? [2 marks]



ANSWER

- 14** Ben works out $\frac{2}{5} \times 2$ and writes $\frac{4}{10}$. What has gone wrong? Circle your answer. [1 mark]

- ☐ The bottom number stays 5, because the parts do not change size
- ☐ The top number should stay 2
- ☐ Nothing, that is the right answer

- 15** Omar writes 8% as 0.8. What is wrong? Circle your answer. [1 mark]

- ☐ Nothing, that is right
- ☐ 8% is 8 hundredths, which is 0.08
- ☐ 8% should be written as 8.0

- 16** Finn works out $\frac{1}{2} \times \frac{1}{10}$ and writes $\frac{2}{12}$. What has gone wrong? Circle your answer. [1 mark]

- ☐ The bottom numbers should have been made the same first
- ☐ The tops and bottoms have been added instead of multiplied
- ☐ Nothing, that is the right answer

- 17 Red, green and blue beads are threaded in the repeating pattern 2 red, 5 green, 4 blue. A necklace uses 44 beads. How many are green? [3 marks]

ANSWER

Page 10 of 10

- 18** Grace draws a circle of radius 14 centimetres, then draws the longest straight line that fits inside it. How long is that line, in centimetres? [3 marks]

ANSWER

Page 10 of 10

- 19 Find 200% of 300, then find 10% of your answer. [2 marks]

ANSWER

Page 10 of 10

- 20 Two co-interior angles are x and $2x$. What is x , in degrees? [2 marks]

ANSWER

Page 10 of 10

- 21 Red, blue and green paint are mixed in the ratio 1 : 2 : 3. 8 litres of blue are used. How many litres of green are needed? [3 marks]

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ANSWER

- 22 The cost of tickets is in proportion to how many you buy: 2 cost £6. What do 7 cost, in pounds? [3 marks]

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ANSWER

- 23 4 friends each buy a drink for £2 and a cake costing £c. Write the total cost, expanded, as an expression in c. [2 marks]

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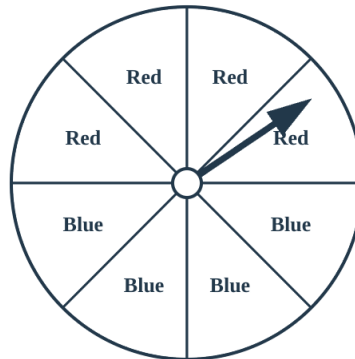
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ANSWER

24

The 8 sectors are equal. How does the chance of red compare with the chance of blue? Circle your answer.

[1 mark]

☐ Red and blue are equally likely☐ Red is more likely than blue☐ Red is less likely than blue

Practice Paper 3

FOR THE MARKER

The marks for every question, the answers to accept and what to award for part of an answer. 36 marks in total.

1	$5x + 10$	[1 mark]
2	15	[1 mark]
3	264	[1 mark]
4	$y = -3$ <i>Award the mark for the correct choice only. Two or more choices marked scores no mark.</i>	[1 mark]
5	7	[1 mark]
6	15	[1 mark]
7	30% <i>Award the mark when the drawing or marking matches the answer shown.</i>	[1 mark]
8	80	[1 mark]
9	cuboid <i>Award the mark for the correct choice only. Two or more choices marked scores no mark.</i>	[1 mark]
10	7	[1 mark]
11	3 cm	[1 mark]
12	$\frac{1}{4}$	[1 mark]
13	8 g <i>Award 2 marks for the correct answer. Award 1 mark for a correct method with no more than one arithmetic error.</i>	[2 marks]
14	The bottom number stays 5, because the parts do not change size <i>Award the mark for the correct choice only. Two or more choices marked scores no mark.</i>	[1 mark]
15	8% is 8 hundredths, which is 0.08 <i>Award the mark for the correct choice only. Two or more choices marked scores no mark.</i>	[1 mark]

16	The tops and bottoms have been added instead of multiplied	[1 mark]
<i>Award the mark for the correct choice only. Two or more choices marked scores no mark.</i>		
17	20	[3 marks]
<i>Award 3 marks for the correct answer. Award 2 marks for a complete method with no more than one arithmetic error. Award 1 mark for a correct first step.</i>		
18	28 cm	[3 marks]
<i>Award 3 marks for the correct answer. Award 2 marks for a complete method with no more than one arithmetic error. Award 1 mark for a correct first step.</i>		
19	60	[2 marks]
<i>Award 2 marks for the correct answer. Award 1 mark for a correct method with no more than one arithmetic error.</i>		
20	60 degrees	[2 marks]
<i>Award 2 marks for the correct answer. Award 1 mark for a correct method with no more than one arithmetic error.</i>		
21	12 litres	[3 marks]
<i>Award 3 marks for the correct answer. Award 2 marks for a complete method with no more than one arithmetic error. Award 1 mark for a correct first step.</i>		
22	21	[3 marks]
<i>Award 3 marks for the correct answer. Award 2 marks for a complete method with no more than one arithmetic error. Award 1 mark for a correct first step.</i>		
23	$4c + 8$	[2 marks]
<i>Award 2 marks for the correct answer. Award 1 mark for a correct method with no more than one arithmetic error.</i>		
24	Red and blue are equally likely	[1 mark]
<i>Award the mark for the correct choice only. Two or more choices marked scores no mark.</i>		

Total

36 marks