

Year 10 Foundation Maths Practice Paper 1

This paper covers: Percentages, Work with fractions, Non-calculator methods, Algebraic manipulation, Quadratic expressions and equations, Straight line graphs, Graphs and diagrams, Probability, Ratio and scale, Perimeter, area and volume, Vectors.

TIME ALLOWED

45 minutes

TOTAL MARKS

36

QUESTIONS

26

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

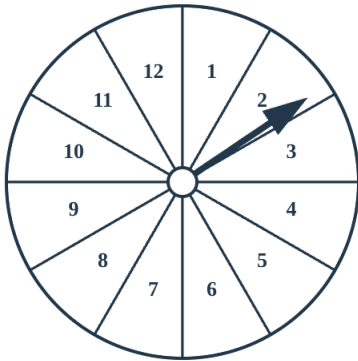
Score _____ **out of 36**

Percentage _____ %

01 Questions

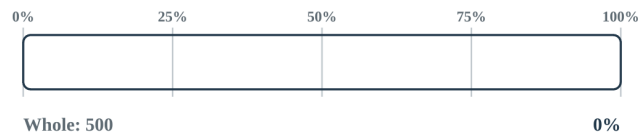
Answer every question. Show your working.

- 1** The spinner is numbered 1 to 12 in equal sectors. How many of the sectors show an odd number? [1 mark]



ANSWER

- 2** The bar stands for 500. Slide the fill to show 50% of it. Write the value the slider should show. [1 mark]



- 3** The counters show 9 sand and 6 cement, grouped in 3s. For every 3 sand, how many cement are there? [1 mark]



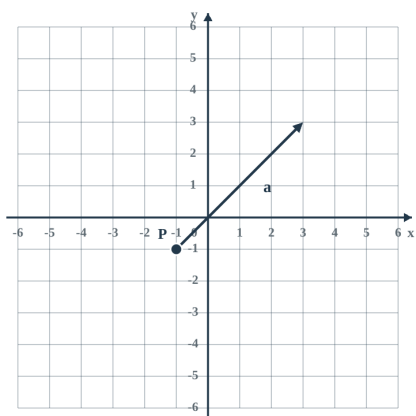
sand



cement

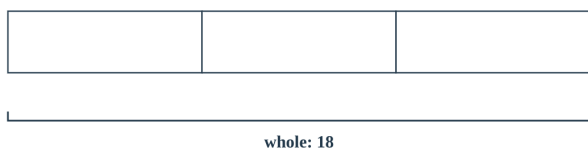
ANSWER

- 4 The arrow starts at P. How far along and how far up does it go? Give along, then up. [1 mark]
Write both answers.



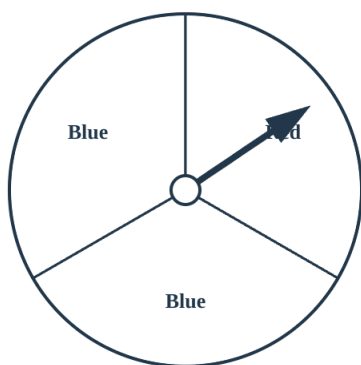
ANSWER

- 5 This bar is worth 18 and is split into 3 equal shares. What is one share worth? [1 mark]



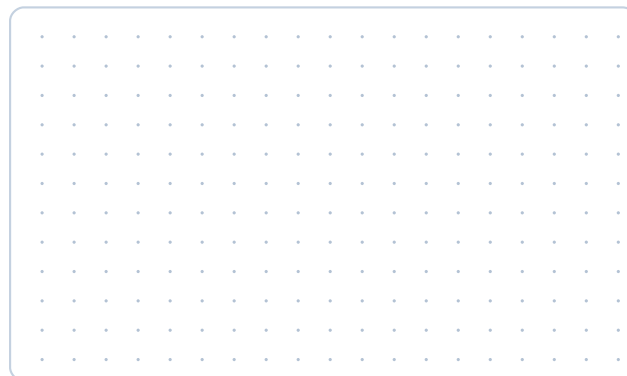
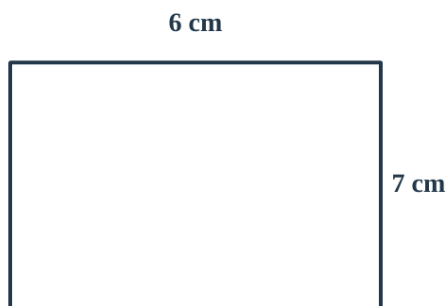
ANSWER

- 6 How many different outcomes can this spinner land on? [1 mark]



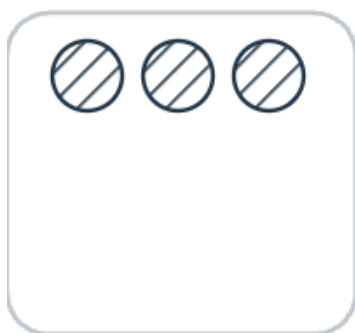
ANSWER

- 7 The sides of this rectangle are marked. What is its area in square centimetres? [1 mark]

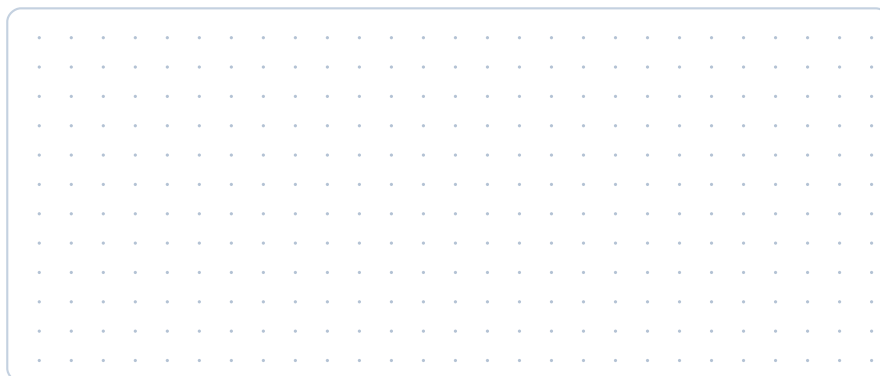


ANSWER

- 8 These 3 counters are $\frac{1}{3}$ of a bag. How many counters are in the whole bag? [1 mark]



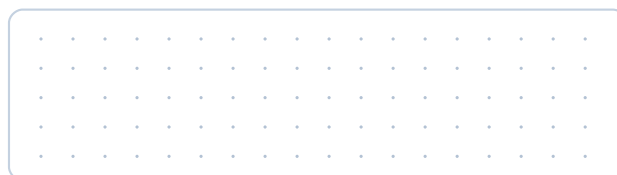
3



ANSWER

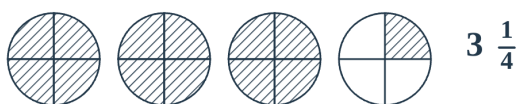
- 9 A spinner was spun and each result tallied. How many times did it land on green? [1 mark]

Colour	Tally	Frequency
Red		6
Blue		7
Green		9



ANSWER

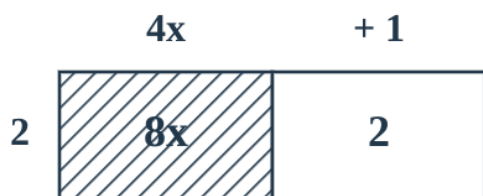
- 10 The circles show a mixed number. What is it? Give the whole part and the fraction. [1 mark]
Write your answer as a mixed number.



ANSWER

- 11 The grid multiplies $2(4x + 1)$. What goes in the second cell, 2×1 ? [1 mark]

$$2(4x + 1)$$



ANSWER

- 12 $2x + 8$ has the value 12. What is x ? [1 mark]

ANSWER

- 13 A square has sides of 5 centimetres. What is its perimeter in centimetres? [1 mark]

ANSWER

- 14 Complete the factorisation $(x + 1)(x + ?) = x^2 - 3x - 4$. What number is missing? [1 mark]

ANSWER

- 15 40 decreased by a percentage becomes 38. What is the percentage? [1 mark]

ANSWER

- 16 A spinner has 3 equal sectors and a second spinner has 4. Both are spun. How many outcomes are there? [2 marks]

ANSWER

- 17 Match each flat shape to its name. Draw a line from each item on the left to its match on the right. [1 mark]

- 18 Work out $35.59 - 19.77$ one column at a time. [2 marks]

$$\begin{array}{r}
 35.59 \\
 - 19.77 \\
 \hline
 \end{array}$$

ANSWER

19 60 pets were counted in all, but the Rabbit row is missing. How many belong in it? [2 marks]

Dog



Cat



Fish

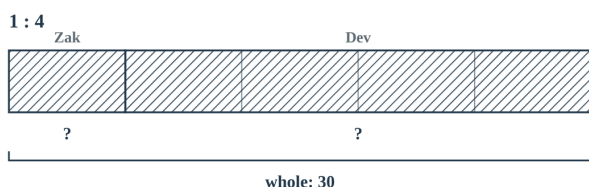


Rabbit

Key: each circle stands for 5 pets

ANSWER

20 Zak and Dev share 30 in the ratio 1 : 4. How much does Zak get? [2 marks]



ANSWER

21 Match each name to the part of a circle it describes. Draw a line from each item on the left to its match on the right. [2 marks]

chord

•

• a part of the edge, between two points

radius

•

• a line across the circle that misses the centre

arc

•

• the distance all the way round the edge

circumference

•

• the line from the centre to the edge

22 Nia has 125 beads and gives $\frac{3}{5}$ of them away. How many beads does Nia give away? [3 marks]

ANSWER

23 A number multiplied by 29 gives 171.1. What is the number? [2 marks]

ANSWER

24 Of 250 people at a concert, 187.5 arrived by train. What percentage arrived by train? [2 marks]

ANSWER

25 The chance that a train is late is 8%. What is the chance it is not late, as a percentage? [2 marks]

ANSWER

26 You plot three points for a straight line and they do not line up. What does that tell you? Circle your answer. [1 mark]

- ☐ One of the y values was worked out wrongly
- ☐ The line is curved
- ☐ You need a fourth point

Practice Paper 1

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	6	[1 mark]
2	50%	[1 mark]
	<i>Award the mark when the drawing or marking matches the answer shown.</i>	
3	2	[1 mark]
4	4 and 4	[1 mark]
5	6	[1 mark]
6	2	[1 mark]
7	42 square centimetres	[1 mark]
8	9	[1 mark]
9	9	[1 mark]
10	$3\frac{1}{4}$	[1 mark]
11	2	[1 mark]
12	2	[1 mark]
13	20 cm	[1 mark]
14	-4	[1 mark]
15	5 %	[1 mark]
16	12	[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>	
17	clock 1 → rhombus; clock 2 → rectangle; clock 3 → trapezium	[1 mark]
	<i>Award the mark only when every part is correct.</i>	

18	15.82	[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>		
19	20	[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	6	[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	chord → a line across the circle that misses the centre; radius → the line from the centre to the edge; arc → a part of the edge, between two points; circumference → the distance all the way round the edge	[2 marks]
<i>Award 2 marks when every part is correct. Award 1 mark when there is exactly one error.</i>		
22	75	[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	5.9	[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	75 %	[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>		
25	92 %	[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>		
26	One of the y values was worked out wrongly	[1 mark]
<i>Award the mark for the correct choice only. Two or more choices marked scores no mark.</i>		

Total

36 marks