

Year 8 Maths Practice Paper 2

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
35 minutes
TOTAL MARKS
28
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 28**

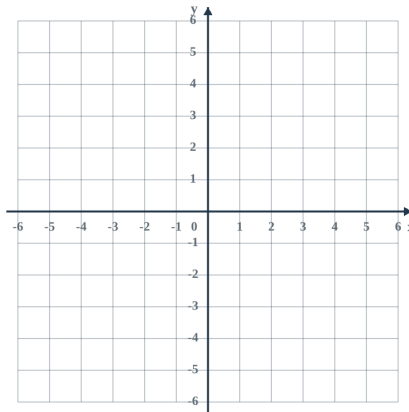
Percentage _____ %

01 Questions

Answer every question. Show your working.

- 1 Draw the line $x = 2$. Draw the line on the grid with a ruler.

[1 mark]



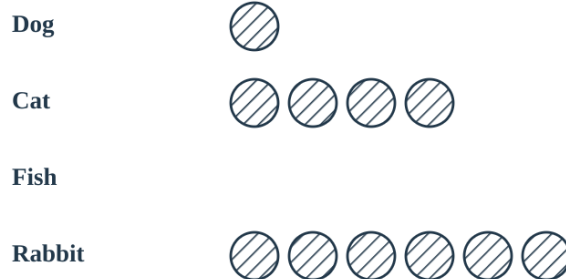
- 2 Build the collected form of $3x + 5 + x + 1$: the x tiles together, then the unit tiles. Draw the tiles.

[1 mark]



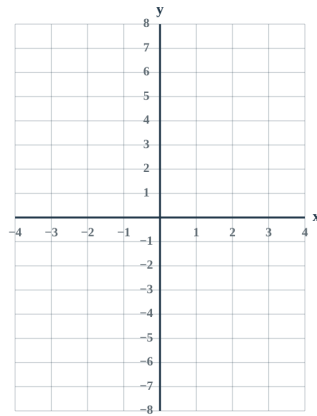
- 3 Fish was chosen by 10 pets. Draw the Fish row, where each picture stands for 5. Draw the symbols in the row.

[1 mark]



Key: each circle stands for 5 pets

- 4 Complete the table for $y = 3x + 2$ in your head, then plot the points for $x = 0, 1, 2$. Plot the points on the grid. [1 mark]

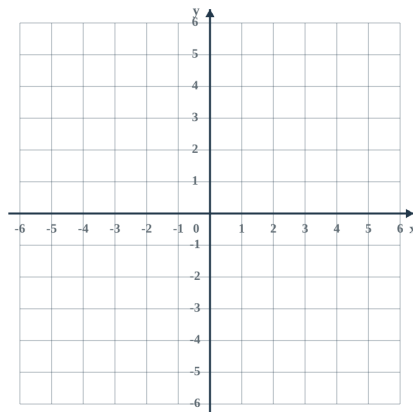


- 5 Ben and Jack share in the ratio 2 : 3. Cut the bar so Ben's share is on the left. Draw the line that cuts the bar. [1 mark]

2 : 3



- 6 Draw the line $y = x$. Draw the line on the grid with a ruler. [1 mark]



- 7 An amount of 240 is increased by 75%. Slide the fill to show the 75% that is added on. Write the value the slider should show. [1 mark]



- 8 Work out $5 \times \frac{5}{12}$. Give your answer as a mixed number. Write your answer as a mixed number. [2 marks]

ANSWER

- 9 Write 105% as a decimal. [1 mark]

ANSWER

- 10 Work out $\frac{4}{5} \times \frac{1}{7}$. Write your answer as a fraction. [2 marks]

ANSWER

- 11 An outcome is an even chance. What number marks it on the probability scale? Give a whole number or a decimal. [1 mark]

ANSWER

12 Simplify $6x - 4y + 4x + y$. [1 mark]

ANSWER

13 What is the reciprocal of the whole number 9? Write your answer as a fraction. [1 mark]

ANSWER

14 Which of these shapes is a equilateral triangle? Circle the one you choose. [1 mark]

15 Match each shape to its area in square centimetres. Draw a line from each item on the left to its match on the right. [1 mark]

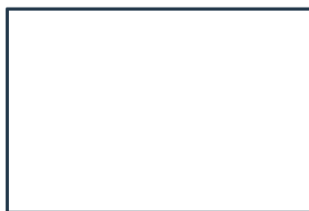
16 A negative value goes in with its sign. What is the value shown on the board? [1 mark]

$x = -1$

$9 - x$

ANSWER

- 17 This shape has 2 lines of symmetry. Place one that is not straight up. Draw all the lines of symmetry on the shape. [1 mark]



- 18** In a class of 32, 21 pupils walk to school. One pupil is picked at random. Is it likely or unlikely that they walk to school? Circle your answer. [1 mark]
- ☐ Likely ☐ Unlikely ☐ An even chance

- 19 Which is bigger: 15% of 140 or 40% of 180? Circle your answer. [1 mark]
- ☐ 15% of 140 ☐ They are equal ☐ 40% of 180

- 20** A ladder leans across two parallel shelves. It makes an angle of 62 degrees with the top shelf, measured on the left. What angle does it make with the bottom shelf on the right, between the shelves? [2 marks]

ANSWER

Page 10 of 10

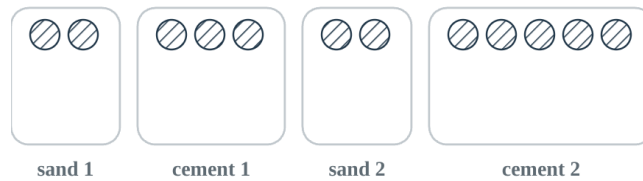
- 21 A spinner lands on red, blue or green. Red and blue are equally likely and the probability of green is 0.5. What is the probability of red? Give a decimal. [2 marks]

ANSWER

Page 10 of 10

- 22** Finn shares £100 with a friend in the ratio 1 : 4 and keeps the smaller part. Zak shares £125 in the ratio 2 : 3 and keeps the smaller part. Who keeps more? Circle your answer. [1 mark]
- ☐ They keep the same ☐ Finn ☐ Zak
-

- 23** Two mixtures of sand and cement are shown. Which has the greater share of sand? Circle your answer. [1 mark]
- ☐ They are the same ☐ The first mixture ☐ The second mixture



- 24** Is this statement true or false? A sector is bounded by two radii and an arc. Circle your answer. [1 mark]
- ☐ False ☐ True
-

Practice Paper 2

FOR THE MARKER

The marks for every question, the answers to accept and what to award for part of an answer. 28 marks in total.

1	$x = 2$ <i>Award the mark when the drawing or marking matches the answer shown.</i>	[1 mark]	2	4 x tiles and 6 unit tiles <i>Award the mark when the drawing or marking matches the answer shown.</i>	[1 mark]
3	2 symbols <i>Award the mark when the drawing or marking matches the answer shown.</i>	[1 mark]	4	(0, 2), (1, 5), (2, 8) <i>Award the mark when the drawing or marking matches the answer shown.</i>	[1 mark]
5	2 of the 5 shares <i>Award the mark when the drawing or marking matches the answer shown.</i>	[1 mark]	6	$y = x$ <i>Award the mark when the drawing or marking matches the answer shown.</i>	[1 mark]
7	75% <i>Award the mark when the drawing or marking matches the answer shown.</i>	[1 mark]	8	$2\frac{1}{12}$ <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]
9	1.05 <i>Award the mark when the drawing or marking matches the answer shown.</i>	[1 mark]	10	$\frac{4}{35}$ <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]
11	0.5 <i>Award the mark when the drawing or marking matches the answer shown.</i>	[1 mark]	12	$10x - 3y$ <i>Award the mark when the drawing or marking matches the answer shown.</i>	[1 mark]
13	$\frac{1}{9}$ <i>Award the mark when the drawing or marking matches the answer shown.</i>	[1 mark]	14	the second one <i>Award the mark when the drawing or marking matches the answer shown.</i>	[1 mark]
15	clock 1 $\rightarrow$ 35; clock 2 $\rightarrow$ 36; clock 3 $\rightarrow$ 28 <i>Award the mark only when every part is correct.</i>	[1 mark]	16	10 <i>Award the mark when the drawing or marking matches the answer shown.</i>	[1 mark]
17	the one line of symmetry <i>Award the mark when the drawing or marking matches the answer shown.</i>	[1 mark]	18	Likely <i>Award the mark for the correct choice only. Two or more choices marked scores no mark.</i>	[1 mark]
19	40% of 180 <i>Award the mark for the correct choice only. Two or more choices marked scores no mark.</i>	[1 mark]	20	118 degrees <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]

21	0.25	[2 marks]	22	Zak	[1 mark]
	Award 2 marks for the correct answer. Award 1 mark for a correct method with no more than one arithmetic error.			Award the mark for the correct choice only. Two or more choices marked scores no mark.	
23	The first mixture	[1 mark]	24	True	[1 mark]
	Award the mark for the correct choice only. Two or more choices marked scores no mark.			Award the mark for the correct choice only. Two or more choices marked scores no mark.	

Total	28 marks
--------------	-----------------