

Maths Mock Test Paper 21

Name: _____

Date: _____

Time allowed: **50 minutes**

50 questions, 1 mark each

Answer **every** question. Each question has five options, **A** to **E**, and exactly one is correct. Work out the answer and mark the letter you have chosen. Marks are not taken away for a wrong answer, so it is worth having a go at every question. **Calculators and rulers are not allowed.**

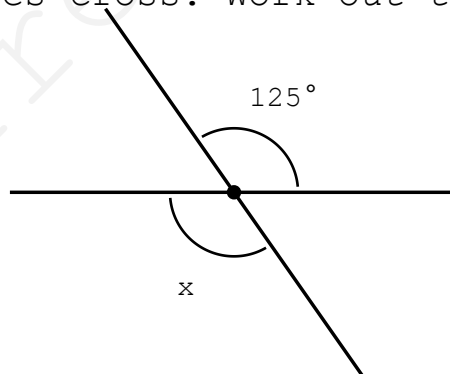
Q1. Write the ratio 8 : 12 in its simplest form.

- A. 2 : 3 B. 3 : 2 C. 1 : 2 D. 3 : 4 E. 4 : 5

Q2. A chocolate bar has 12 equal squares. Ben eats 4 of them. What fraction of the bar is left, written in its simplest form?

- A. $\frac{1}{3}$ B. $\frac{1}{2}$ C. $\frac{2}{3}$ D. $\frac{3}{4}$ E. $\frac{5}{6}$

Q3. Two straight lines cross. Work out the size of angle x.



- A. 35° B. 55° C. 65° D. 125° E. 235°

Q4. Use the pictogram. How many apples and oranges were sold altogether?



Key: ○ = 10 pieces of fruit

- A. 20 B. 30 C. 50 D. 60 E. 80

Q5. A tap fills a 500 ml jug in 20 seconds. At the same rate, how long does it take to fill a 3 litre bucket?

- A. 1 minute
B. 1 minute 30 seconds
C. 2 minutes
D. 2 minutes 30 seconds
E. 3 minutes

Q6. How many minutes are there in 2.5 hours?

- A. 120 B. 140 C. 150 D. 160 E. 250

Q7. Which number becomes 4,500 when rounded to the nearest hundred?

- A. 4,462 B. 4,548 C. 4,593 D. 4,601 E. 4,725

Q8. A hall is set out with 4 rows of 9 chairs. How many chairs are there?

- A. 13 B. 27 C. 32 D. 36 E. 45

Q9. Tom works out $34 + 29$ and writes down 53. Without adding the numbers again, how can you tell straight away that he is wrong?

- A. Rounding 29 up to 30 gives about 64, so 53 is far too small
- B. The answer has to end in a 3
- C. The answer has to be an even number
- D. Both 34 and 29 are smaller than 53
- E. There is no way to tell without adding again

Q10. Every spider has 8 legs. Which of these could be the total number of legs on a group of spiders?

- A. 36
- B. 44
- C. 52
- D. 56
- E. 60

Q11. Ali estimates $612 \div 29$ by working out $600 \div 30$ instead. Is his estimate bigger or smaller than the real answer, and why?

- A. Bigger, because he made the number being divided smaller
- B. Smaller, because he made the number being divided smaller and the divider bigger
- C. The same, because he rounded both numbers
- D. Bigger, because he rounded 29 upwards
- E. There is no way to tell without dividing

Q12. How many factors does 48 have?

- A. 8
- B. 9
- C. 10
- D. 11
- E. 12

Q13. In a card game, red cards score -4 points and blue cards score 7 points. Sam has 3 red cards and 4 blue cards. What is his total score?

- A. 12
- B. 16
- C. 19
- D. 28
- E. 40

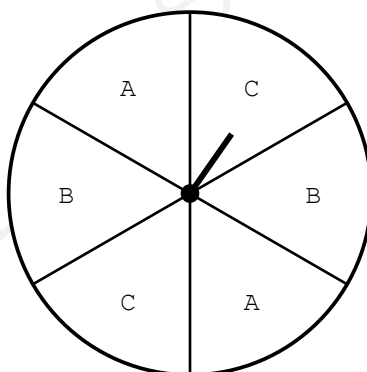
Q14. The n th term of a sequence is $100 - 7n$. Which is the first term that is negative?

- A. 13th term B. 14th term C. 15th term D. 16th term E. 17th term

Q15. A minibus holds 15 people. 68 people go on a trip. How many minibuses are needed, and how many empty seats are there on the last one?

- A. 4 buses, with 8 empty seats
 B. 4 buses, with 7 empty seats
 C. 5 buses, with 7 empty seats
 D. 5 buses, with 8 empty seats
 E. 5 buses, with no empty seats

Q16. The spinner has 6 equal sections. What is the probability that it does not land on A?



- A. $\frac{1}{6}$ B. $\frac{1}{3}$ C. $\frac{1}{2}$ D. $\frac{2}{3}$ E. $\frac{5}{6}$

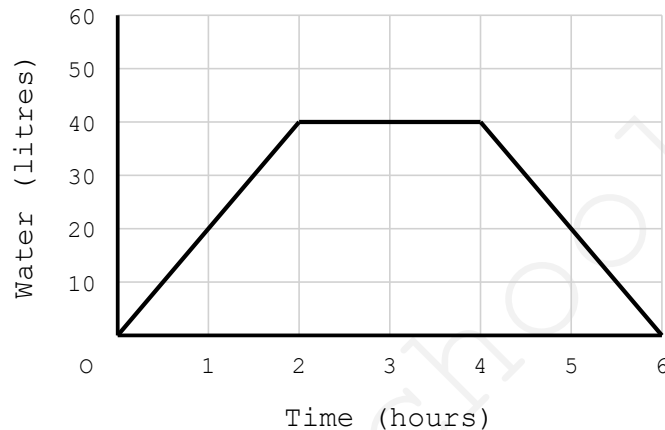
Q17. A programme lasts 40 minutes and is shown three times. The first showing starts at 09:15, and there are 20 minutes between one showing ending and the next starting. At what time does the last showing end?

- A. 11:15 B. 11:35 C. 11:55 D. 12:15 E. 12:35

Q18. A runner completes 5 km in 25 minutes. What is the average speed in kilometres per hour?

- A. 5 km/h B. 10 km/h C. 12 km/h D. 15 km/h E. 20 km/h

Q19. Use the water tank graph. How many litres drained out of the tank each hour while it was emptying?



- A. 10 litres B. 15 litres C. 20 litres D. 30 litres E. 40 litres

Q20. A number line is marked in steps of 3, and one of its marks is at -6. Which of these numbers is also a mark on that line?

- A. -8 B. -4 C. -1 D. 5 E. 9

Q21. Ravi eats $\frac{1}{4}$ of a pizza and Mia eats $\frac{1}{3}$ of the same pizza. What fraction of the pizza is left?

- A. $\frac{1}{12}$ B. $\frac{5}{12}$ C. $\frac{7}{12}$ D. $\frac{2}{7}$ E. $\frac{3}{4}$

Q22. A journey of 180 km is driven at a steady 60 km/h. How long does it take?

- A. 2 hours
- B. 2 hours 30 minutes
- C. 3 hours
- D. 3 hours 30 minutes
- E. 4 hours

Q23. Point A is at (2, 3). Point B is 6 squares to the right of A and 2 squares below it. What are the coordinates of the middle of the line from A to B?

- A. (5, 2)
- B. (4, 2)
- C. (5, 1)
- D. (6, 2)
- E. (8, 1)

Q24. What number is 1,000 less than 23,745?

- A. 22,745
- B. 23,645
- C. 24,745
- D. 23,705
- E. 22,845

Q25. A car travels 150 km in 2 hours at a steady speed. How far does it travel in 5 hours at the same speed?

- A. 300 km
- B. 350 km
- C. 375 km
- D. 400 km
- E. 450 km

Q26. If $a = 5$ and $b = 3$, which of these expressions has the largest value?

- A. $a + b$
- B. ab
- C. $a - b$
- D. $2a + b$
- E. $a + 2b$

Q27. A cuboid has a volume of 60 cm^3 and a base measuring 5 cm by 3 cm. What is its height?

- A. 2 cm
- B. 3 cm
- C. 4 cm
- D. 6 cm
- E. 12 cm

Q28. Convert 0.75 km to metres.

- A. 7.5 m
- B. 75 m
- C. 750 m
- D. 7,500 m
- E. 75,000 m

Q29. A car travels at 68 mph for 4 hours. Estimate the total distance by rounding 68 to the nearest 10.

- A. 240 B. 272 C. 280 D. 300 E. 320

Q30. Which of these numbers cannot be made by multiplying two whole numbers that are both bigger than 1?

- A. 21 B. 27 C. 33 D. 39 E. 41

Q31. What is 16×5 ?

- A. 60 B. 70 C. 75 D. 80 E. 96

Q32. The table shows the pets kept by the boys and girls in a class. How many more girls than boys keep a pet of some kind?

Pupils	Dog	Cat	No pet
Boys	6	4	3
Girls	5	9	2

- A. 2 B. 3 C. 4 D. 5 E. 9

Q33. Use the flight timetable. Passengers must check in 90 minutes before departure. What is the latest check-in time for BA455?

Flight	Departs	Arrives
BA210	07:15	09:50
BA340	10:30	13:20
BA455	15:05	17:35

- A. 13:05 B. 13:35 C. 13:45 D. 14:05 E. 14:35

Q34. One angle of an isosceles triangle measures 40° . Which of these could NOT be one of its other angles?

- A. 40°
- B. 70°
- C. 80°
- D. 100°
- E. They are all possible

Q35. I think of a number, subtract 6 and then multiply by 3. The answer is 27. What was my number?

- A. 9
- B. 12
- C. 15
- D. 18
- E. 21

Q36. Five litres of paint are mixed from white and blue paint in the ratio 3 : 2. How much blue paint must be added to make the ratio 1 : 1?

- A. 0.5 litres
- B. 1 litre
- C. 1.5 litres
- D. 2 litres
- E. 3 litres

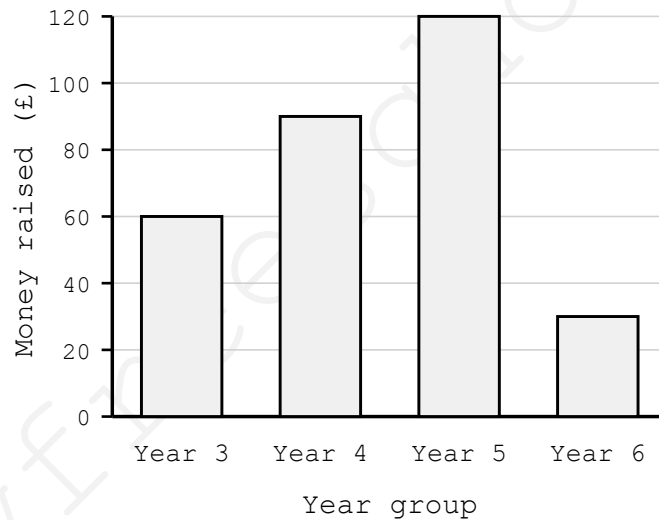
Q37. A path is 1.2 km long. How many paving stones 30 cm long, laid end to end, would cover it?

- A. 40
- B. 400
- C. 4,000
- D. 40,000
- E. 400,000

Q38. Two triangles are described. Triangle P has vertices $(0, 0)$, $(8, 0)$ and $(0, 3)$. Triangle Q has vertices $(0, 0)$, $(4, 0)$ and $(0, 6)$. Which is true?

- A. P has the larger area
- B. Q has the larger area
- C. P has twice the area of Q
- D. Q has three times the area of P
- E. They have equal areas

Q39. Use the bar chart. Every £1 raised buys 5 pencils for a school library. How many pencils does all the money raised buy?



- A. 600
- B. 1200
- C. 1500
- D. 1800
- E. 3000

Q40. Train A leaves a station at 10:00 travelling at 60 km/h. Train B leaves the same station at 10:30 on the same route at 90 km/h. At what time does train B catch up with train A?

- A. 11:00
- B. 11:15
- C. 11:30
- D. 12:00
- E. 12:30

Q41. A shop buys pens for £1.20 each and sells them for £1.80. How many pens must it sell to make £45 of profit?

- A. 25 B. 36 C. 54 D. 75 E. 90

Q42. The length of a rectangle is doubled and its width is halved. What happens to its area?

- A. It stays the same
B. It doubles
C. It halves
D. It becomes four times as big
E. It becomes a quarter of the size

Q43. Each interior angle of a regular polygon is 165° . How many sides does it have?

- A. 18 B. 20 C. 22 D. 24 E. 30

Q44. Look at the calendar. A swimming gala is held on the second Saturday, and the prize evening is 10 days after it. What is the date of the prize evening?

Mon	Tue	Wed	Thu	Fri	Sat	Sun
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

- A. 16 B. 17 C. 18 D. 19 E. 20

Q45. What is 45×11 ?

- A. 450 B. 485 C. 490 D. 495 E. 505

Q46. Sam scored 80% in a test and got 32 questions right. How many questions were on the test?

- A. 36 B. 38 C. 40 D. 44 E. 48

Q47. Three numbers have a total of -6. Two of them are -5 and 4. What is the third number?

- A. -9 B. -5 C. -3 D. 3 E. 5

Q48. Which of these numbers rounds to 5.3 to one decimal place and also rounds to 5 to the nearest whole number?

- A. 5.24 B. 5.26 C. 5.35 D. 5.46 E. 5.53

Q49. Solve for x.

$$x \div 3 + 5 = 12$$

- A. 7 B. 14 C. 21 D. 36 E. 51

Q50. Sara writes two and a half million in figures. How many zeros does she write?

- A. 3 B. 4 C. 5 D. 6 E. 7