Maths Mock Test Paper 28

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. Jo writes the largest 4-digit number that has four different digits. What number does she write?

A. 9,999 *B.* 9,870 *C.* 9,867 *D.* 9,876 *E.* 6,789

Q2. Mia was born on 30 June 2014. How old was she on 1 June 2025?

A. 9 *B.* 11 *C.* 10 *D.* 12 *E.* 14

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Q3. The table shows the temperature at different times on one day. Between which two times next to each other did the temperature rise by exactly 5 degrees?

Time	Temperature
06:00	−4°C
09:00	1°C
12:00	5°C
15:00	2°C
18:00	−3°C

A. 06:00 and 09:00

B. 09:00 and 12:00

C. 12:00 and 15:00

D. 15:00 and 18:00

E. 06:00 and 18:00

Q4. The table shows the mass of five parcels. Which two parcels together weigh exactly 2 kg?

Parcel	Mass
A	750 g
B	1.4 kg
C	1,250 g
D	0.5 kg
E	900 g

A. B and D *B.* B and E *C.* C and D *D.* A and C *E.* A and E

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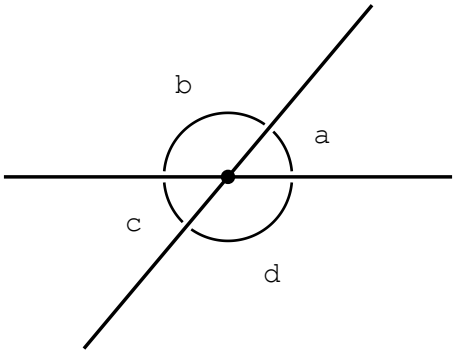
Q5. Two straight lines cross. Which angle must be the same size as angle a?



A. b

B. c

C. d

D. none of them

E. all of them

Q6. The pages of a booklet are numbered from 1 to 20. How many digits are printed altogether?

A. 20 *B.* 29 *C.* 30 *D.* 40 *E.* 31

Q7. How many of these numbers are prime?

21, 23, 25, 27, 29

A. 1 *B.* 2 *C.* 3 *D.* 4 *E.* 5

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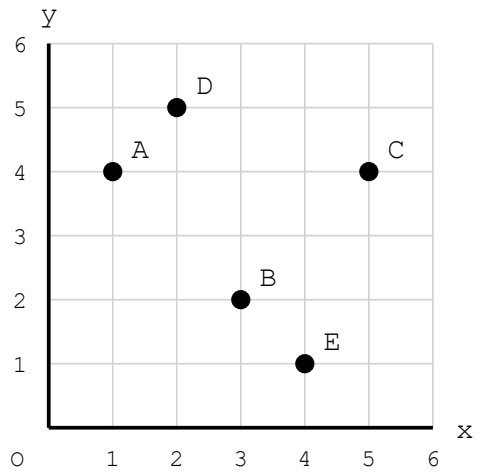
Q8. Which two points on the grid have the same y-coordinate?



A. A and C *B.* A and D *C.* B and E *D.* C and D *E.* D and E

Q9. Which of these ratios is NOT the same as 2 : 3?

A. 4 : 6 *B.* 6 : 9 *C.* 10 : 15 *D.* 20 : 30 *E.* 8 : 10

Q10. Ali runs 100 m in 20 seconds. Ben runs 200 m in 50 seconds. Who runs faster, and by how many metres each second?

A. Ali, by 1 metre

B. Ben, by 1 metre

C. They are equally fast

D. Ben, by 100 metres

E. Ali, by 30 metres

Q11. How many thousands are there in 3.4 million?

A. 34 *B.* 340 *C.* 34,000 *D.* 3,400 *E.* 3,400,000

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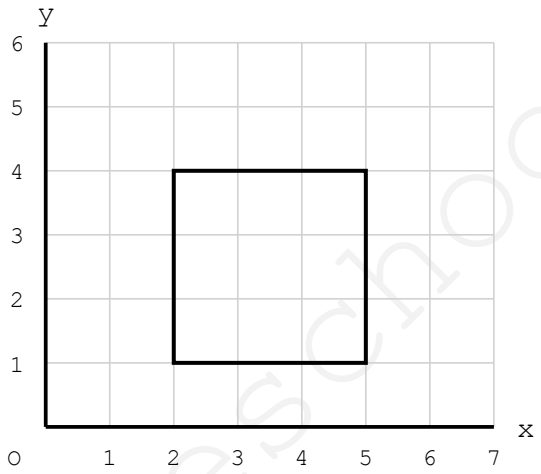
Q12. The letters of the word MATHEMATICS are written on cards, one letter on each card. One card is picked at random. What is the probability that it shows a vowel?

A. 1/5 *B.* 4/11 *C.* 3/11 *D.* 4/7 *E.* 7/11

Q13. How many points with whole-number coordinates lie inside the square drawn on the grid, not counting the points on its edges?



A. 6 *B.* 9 *C.* 4 *D.* 12 *E.* 16

Q14. A bag of apples weighs 1.35 kg. The empty bag weighs 50 g, and each apple weighs 130 g. How many apples are in the bag?

A. 9 *B.* 11 *C.* 13 *D.* 10 *E.* 26

Q15. A square garden has an area of 49 m². A fence goes all the way round it, except for a gap of 1 m left for a gate. How much fencing is needed?

A. 13 m *B.* 28 m *C.* 27 m *D.* 29 m *E.* 48 m

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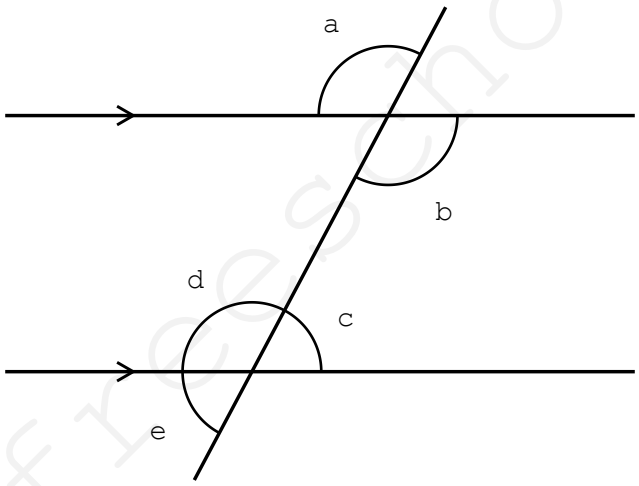
Q16. Ella rounds 0.96 to one decimal place and writes 0.10. What should she have written?

A. 1.0 *B.* 0.9 *C.* 0.97 *D.* 0.10 *E.* 10.0

Q17. Two speed cameras are 500 m apart. A car takes 20 seconds to drive from one to the other. What is its average speed in kilometres per hour?

A. 25 km/h *B.* 90 km/h *C.* 50 km/h *D.* 100 km/h *E.* 150 km/h

Q18. The two long lines are parallel. Which pair of marked angles must add up to 180°?



A. a and b *B.* a and d *C.* c and e *D.* b and d *E.* a and c

Q19. Which of these numbers is closer to −4 than it is to 0?

A. −1.5 *B.* −2.5 *C.* −2 *D.* 1 *E.* 2

Q20. A book of 210 pages has three chapters. Chapter 2 is twice as long as chapter 1, and chapter 3 is 10 pages longer than chapter 2. How many pages are in chapter 3?

A. 40 *B.* 70 *C.* 90 *D.* 80 *E.* 100

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Q21. Seven of the eight factors of a number are 1, 2, 3, 4, 6, 8 and 12. What is the number?

A. 24 *B.* 12 *C.* 16 *D.* 36 *E.* 48

Q22. At the same time of day, a stick 1.5 m tall casts a shadow 2 m long, and a tree casts a shadow 12 m long. How tall is the tree?

A. 8 m *B.* 10.5 m *C.* 11.5 m *D.* 9 m *E.* 16 m

Q23. What is $15 \times 16 - 15 \times 6$?

A. 90 *B.* 234 *C.* 240 *D.* 1,500 *E.* 150

Q24. What fraction must be added to 1/2 + 1/3 to make exactly 1?

A. 1/6 *B.* 1/5 *C.* 1/4 *D.* 2/5 *E.* 5/6

Q25. A digital clock uses the 24-hour clock. How many times in one whole day does it show a time whose four digits are all the same?

A. 2 *B.* 4 *C.* 3 *D.* 6 *E.* 10

Q26. $2a = 3b$, and $b = 8$. What is the value of $a + b$?

A. 16 *B.* 24 *C.* 28 *D.* 20 *E.* 32

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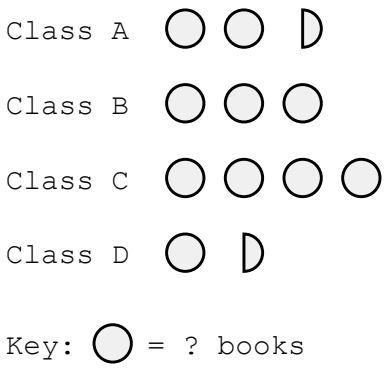
Q27. The pictogram shows how many books four classes read, but the number in the key is missing. Class A read 30 books. How many books did class C read?



A. 40 *B.* 48 *C.* 42 *D.* 60 *E.* 120

Q28. A fraction is equivalent to 3/4. Its numerator and denominator add up to 35. What is the fraction?

A. 12/16 *B.* 18/24 *C.* 20/15 *D.* 5/30 *E.* 15/20

Q29. A square has an area of 50 cm². A second square is drawn inside it, with its corners at the midpoints of the sides of the first square. What is the area of the second square?

A. 25 cm² *B.* 12.5 cm² *C.* 20 cm² *D.* 35 cm² *E.* 40 cm²

Q30. When a number is divided by 8, the answer is 13 remainder 5. What is the answer when the same number is divided by 4?

A. 26 remainder 5

B. 27 remainder 3

C. 28 remainder 1

D. 54 remainder 1

E. 27 remainder 1

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Q31. Which of these is the best estimate of the number of seconds in one week?

A. 6,000 *B.* 60,000 *C.* 600,000 *D.* 100,000 *E.* 6,000,000

Q32. A bag holds 3 red, 5 blue and 2 green counters. One counter is taken out at random. Which of these statements is true?

A. Green is more likely than red

B. Red is twice as likely as green

C. Blue is less likely than red

D. Blue is as likely as not blue

E. Getting green is impossible

Q33. A club has 30 members. One third of the boys is the same number as one half of the girls. How many boys are in the club?

A. 10 *B.* 18 *C.* 12 *D.* 15 *E.* 20

Q34. A rule says 'multiply by 3, then subtract 4'. Sam uses the rule on a number, then uses it again on the answer, and ends up with 38. What number did he start with?

A. 4.5 *B.* 10 *C.* 14 *D.* 42 *E.* 6

Q35. Two opposite corners of a square are at (1, 1) and (5, 5). Where are the other two corners?

A. (3, 1) and (3, 5)

B. (1, 5) and (5, 1)

C. (0, 3) and (6, 3)

D. (3, 3) and (7, 7)

E. (1, 9) and (9, 1)

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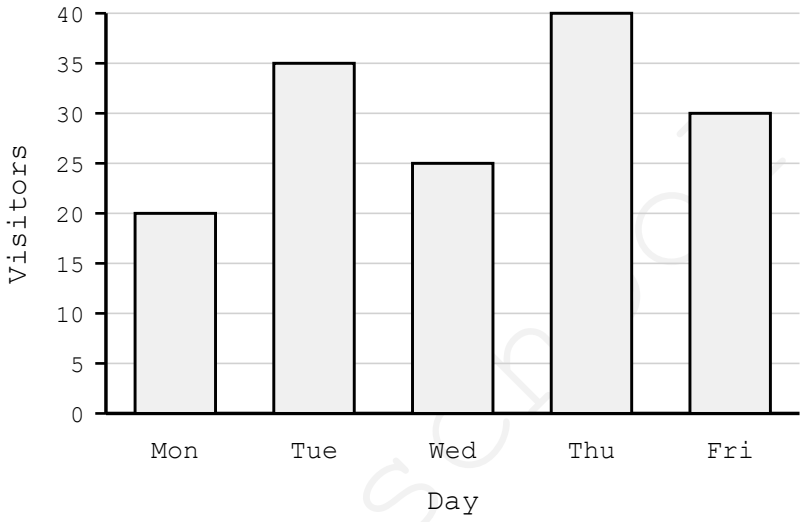
Q36. What is 1 − 2 + 3 − 4 + 5 − 6 + … + 99 − 100?

A. −100 *B.* 0 *C.* 50 *D.* −50 *E.* 5,050

Q37. The bar chart shows how many people visited a gallery each day. On which day was the number of visitors equal to the mean for the five days?



A. Monday *B.* Tuesday *C.* Wednesday *D.* Thursday *E.* Friday

Q38. Ann and Bo have 17 marbles between them, Bo and Cy have 21, and Ann and Cy have 18. How many marbles does Cy have?

A. 11 *B.* 7 *C.* 10 *D.* 14 *E.* 28

Q39. x is a whole number. 2x − 1 is bigger than 3 but smaller than 11. How many different values can x have?

A. 2 *B.* 4 *C.* 3 *D.* 5 *E.* 7

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Q40. Three identical pumps together empty a pond in 40 minutes. After 10 minutes, one pump breaks down and the other two carry on. How long does it take to empty the pond altogether?

A. 45 minutes

B. 50 minutes

C. 60 minutes

D. 55 minutes

E. 70 minutes

Q41. An isosceles triangle has one side of 4 cm and one side of 9 cm. What is its perimeter?

A. 13 cm

B. 17 cm

C. 22 cm

D. 26 cm

E. It could be 17 cm or 22 cm

Q42. A car travels 45 miles on each gallon of petrol, and one gallon is about 4.5 litres. About how many litres of petrol does it use to travel 180 miles?

A. 4 *B.* 18 *C.* 10 *D.* 40 *E.* 810

Q43. Each of the digits 0, 1, 5 and 8 is used once, with a decimal point, to make a number. Which of these is closest to 1?

A. 1.085 *B.* 0.851 *C.* 0.815 *D.* 10.58 *E.* 1.058

Q44. Kim rounds each of eight whole numbers to the nearest 10 and adds up the rounded numbers. Her total is 400. What is the largest that the real total of the eight numbers could be?

A. 404 *B.* 408 *C.* 432 *D.* 436 *E.* 440

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Q45. A clock strikes once at 1 o'clock, twice at 2 o'clock, and so on up to 12 times at 12 o'clock. It does this in the morning and again in the afternoon. How many times does it strike in one whole day?

A. 156 *B.* 78 *C.* 144 *D.* 288 *E.* 300

Q46. Ali and Ben run round a 400 m track in the same direction, starting together. Ali runs at 6 m/s and Ben at 5 m/s. How long is it before Ali is a whole lap ahead of Ben?

A. 40 seconds

B. 80 seconds

C. 4 minutes

D. 36 minutes 40 seconds

E. 6 minutes 40 seconds

Q47. What is the largest whole number n for which n × 17 is less than 500?

A. 28 *B.* 30 *C.* 31 *D.* 29 *E.* 483

Q48. A room is 5 m long, 4 m wide and 2.5 m high. Its four walls are to be painted, ignoring the door and window. One tin of paint covers 10 m². How many tins are needed?

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

Q49. How many three-digit numbers are multiples of 25?

A. 35 *B.* 36 *C.* 39 *D.* 40 *E.* 900

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Q50. Amy's savings go up from £40 to £50. Ben's savings go up from £50 to £60. Which of these is true?

A. Both rose by 10%

B. Both rose by 20%

C. Amy's rose by 25% and Ben's by 20%

D. Amy's rose by 20% and Ben's by 25%

E. Amy's rose by 25% and Ben's by 16%

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