



Product title: Mathematics MCQ for Eleven Plus - Sample Sheet - 3.pdf

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Mathematics Sample Test

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Questions

1. Find HCF(Highest Common Factor) and LCM(Lowest Common Multiple) of 122 and 880

- A: HCF=1, LCM=110375
- B: HCF=1, LCM=106359
- C: HCF=2, LCM=53680
- D: HCF=1, LCM=105240
- E: HCF=1, LCM=107726

2. Simplify the fraction $\frac{745}{578}$

- A: $\frac{371}{290}$
- B: $\frac{748}{581}$
- C: $\frac{248}{193}$
- D: $\frac{745}{578}$
- E: $\frac{744}{575}$

3. What is $457 - 233$?

- A: 227
- B: 226
- C: 224
- D: 229

4. Write 846 as product of primes

- A: $2 \times 5^2 \times 17$
- B: 2×53
- C: 3×281
- D: 2×421
- E: $2 \times 3^2 \times 47$

5. What is $219 \div 501$?

- A: 2.25
- B: 0.44
- C: 2.1
- D: -0.34
- E: -0.97

6. Is 157 a prime number?

- A: False
- B: True

7. What is 166 hours as a fraction of 1 week?

- A: $2/7$
- B: $83/84$
- C: $5/7$
- D: $41/84$
- E: $11/14$

8. What is the difference between 'six thousand, three hundred four' and 520?

- A: 5805
- B: 5819
- C: 5800
- D: 5784
- E: 5791

9. What is the first 5-digit multiple of 960?

- A: 10560
- B: 4800
- C: 12480
- D: 5760
- E: 14400

10. How many apples at 41p each can be bought with £20?

- A: 48
- B: 49
- C: 44
- D: 53
- E: 46

11. In the sequence below, it takes two operations to go from one term to the next. 49, 176, 557, 1700, 5129, ... What is the next term in the sequence?

- A: 15155
- B: 14690
- C: 15231
- D: 15416
- E: 16774

12. A donkey walks at a speed of 6.4 km per hour. What is its speed in metres per second?

- A: 1.51 metre per second
- B: 2.13 metre per second
- C: 1.78 metre per second
- D: 2.92 metre per second
- E: 0.73 metre per second

13. In 2023, the fastest car travelled at 1182 km/h. Rounded to the nearest 10 m, how many metres per second is that equivalent to?

- A: 330 m/s
- B: 186 m/s
- C: 493 m/s
- D: 224 m/s
- E: 170 m/s

14. A school has 8339 pupils. If 7% are absent, how many pupils are present?

- A: 7755 pupils
- B: 8296 pupils
- C: 7332 pupils
- D: 7796 pupils
- E: 7591 pupils

15. What is the difference between 9.800 rounded to 1 decimal place and 2.845 rounded to 1 decimal place?

- A: 7.08
- B: 6.91
- C: 6.85
- D: 6.94
- E: 7.00

16. $9\% \text{ of } N = 15\% \text{ of } M$. What is the ratio of N to M?

- A: 17 : 4
- B: 6 : 7
- C: 5 : 3
- D: 19 : 5
- E: 13 : 14

17. What is the product of the number of factors of 62 and the lowest prime number?

- A: 2
- B: 1
- C: 15
- D: 5
- E: 8

18. What is the answer to $38 \times 31 + 38 \times 35$?

- A: 2578
- B: 2368

- C: 2508
- D: 2638
- E: 2408

19. What is 78% of 2235?(Round the answer to the nearest Integer)

- A: 1747
- B: 1790
- C: 1737
- D: 1752
- E: 1743

20. A theme park ride has 25 compartments. 13 people can sit in each compartment. On one ride, half of the compartments are half full; one-fifth of the compartments are a quarter full; and the remaining compartments are two-thirds full. How many people are there on the ride?

- A: 135
- B: 163
- C: 141
- D: 126
- E: 156

21. What is the perimeter of a regular pentagon with area 94 cm^2 ?(Round the answer to the nearest Integer)

- A: 39
- B: 37
- C: 44
- D: 36
- E: 30

22. I have opposite sides equal and my diagonals bisect each other. What shape could I be?

- A: Square
- B: Rhombus
- C: Kite

D: Parallelogram

E: Rectangle

23. Mr Edward sells collection of second-hand books for 20% less than the price he paid for them. If Mr Edward receives £94 for the second-hand books, how much did he originally pay for them?

A: £116

B: £126

C: £118

D: £110

E: £121

24. 18 pupils in a class write with their right hand. 8 pupils write with their left hand. 3 of these pupils are counted thrice as they can write with their right hand and left hand. How many pupils are in the class?

A: 26

B: 23

C: 30

D: 20

E: 16

25. Let the price of gold per gram be £40. Let the price of a diamond per gram be £10000. A jeweller makes rings with gold and diamonds. The cost of a ring, R, in pounds (£) is: $R = 40wg + 10000wd + 10\% (40wg + 10000wd)$, where wg is the weight of the gold in g, and wd is the weight of the diamond in g. How much does a ring that consists of 4 g of gold and 0.2 g of diamond cost to buy?

A: £2365

B: £2331

C: £2346

D: £2376

E: £2551

26. George is saving for a new phone. The phone costs £218 and George saves 1/2 of his pocket money each week. It takes George exactly 30 weeks to save the money for the phone. How much pocket money does George receive each week? (Round the answer to the nearest Integer)

- A: £13
- B: £15
- C: £14
- D: £16
- E: £18

27. A pencil weighs the same as 6 sheets of paper. A rubber weighs the same as 40 sheets of paper. How many pencils weigh the same as 5 rubbers?(Round the answer to nearest Integer)

- A: 36
- B: 33
- C: 19
- D: 18
- E: 28

28. George sets off on a journey. He travels for 19 km on a B road, which takes 25 minutes. Then He takes a motorway for the rest of the journey, on which He completes a further 67 km in 35 minutes. What is George's average speed for the whole journey?

- A: 70 km/h
- B: 86 km/h
- C: 97 km/h
- D: 105 km/h
- E: 77 km/h

29. Isla is 7 years old, Thomas is 11 and Olivia is 12. Auntie Anna gives the children £125 and asks them to share it in the ratio of their ages. How much more money should Olivia receive than Isla?

- A: £21.
- B: £25.
- C: £26.
- D: £16.
- E: £23.

30. How many fiftieths are there in 18?

- A: 525
- B: 771
- C: 519
- D: 900
- E: 918

31. 8 pickers can harvest 6 acres of land in 1 days. How many pickers will be required to harvest 17 acres of land in 1 day?

- A: 21
- B: 17
- C: 23
- D: 24
- E: 20

32. A car travels 10 km on one litre of petrol. If one litre of petrol costs £1.71, what is the approximate cost of petrol for a 100 km journey?

- A: £9.9
- B: £10.8
- C: £17.1
- D: £17.2
- E: £20.7

33. There are 352 oranges on a tree. 10 oranges are picked every day. For how many days can this be done before the oranges run out?

- A: 44
- B: 42
- C: 35
- D: 38
- E: 39

34. I buy a house for £152846, but it falls in value by 8% during the first year. The value then increases by 6% during the 2nd year. How much above the original price is the house worth at the end of the 2nd year?

- A: £-3791
- B: £100
- C: £3790
- D: £100
- E: £5307

35. Which one of the following is not equivalent to ' $2a = b + c$ '?

- A: $2a - b - c = 0$
- B: $2a - b = c$
- C: $2a + b = c$
- D: $b = 2a - c$
- E: $6a = 3b + 6c$

36. Ms Wilson's watch says the correct time on Monday at 12 noon. Then her watch starts to run slowly and loses one minute every 10 minutes. What time does Ms Wilson's watch say at 18:20 the same day?

- A: 17:30
- B: 17:23
- C: 17:40
- D: 18:10
- E: 17:42

37. Small cubes each have lengths of 3 cm. A number of these cubes are used to make a larger, solid cube of length 12 cm. How many such small cubes are required?

- A: 65
- B: 84
- C: 47
- D: 74
- E: 64

38. Which two numbers are not both square and cube numbers?

- A: 1, 64

B: 24, 50

C: 33, 51

D: 13, 68

E: 22, 98

39. What is the 92th term of the sequence? 12, 17, 22, 27, 32, 37, ...

A: 452

B: 468

C: 488

D: 486

E: 467

40. A carpenter has a piece of wood that is 63.20 m long. The wood needs to be cut into smaller pieces that are each 4.75 m in length. How many 4.75 m pieces can the carpenter cut?

A: 13 pieces

B: 18 pieces

C: 9 pieces

D: 8 pieces

E: 16 pieces

41. Three consecutive numbers have a sum of 228. What is the largest of the three numbers?

A: 81

B: 73

C: 83

D: 77

E: 86

42. A snake can travel 13 times the length of its body in one minute. If the snake is 4 m long, approximately how far can it travel in 1 hour?

A: 3.4 km

B: 3.1 km

C: 5.1 km

D: 7.1 km

E: 5.4 km

43. [-3, 13, 0, 16, 7, -7, 5, 9, 18, -3, -5]

(a): What is the range?

A: -7

B: 18

C: 6

D: 25

E: -8

(b): What is the median?

A: 8

B: -10

C: -1

D: 18

E: 5

(c): What is the mode?

A: 19

B: -3

C: 3

D: -1

E: -4

(d): What is the mean (rounded to 2 decimal places)?

A: 4.55

B: 2.2

C: 6.0

D: 4.53

E: 5.6

44. Which square number lies between 1646 and 2111?

A: 2029

B: 1896

C: 1678

D: 1681

E: 1908

45. A triangle has coordinates (9, 7), (0, 8) and (2, 8). What type of triangle is it?

A: scalene triangle

B: isosceles triangle with no right angle

C: equilateral triangle

D: right-angled triangle but not isosceles

E: right-angled isosceles triangle

46. Oliver runs 3 km before work and 3 km after work every weekday. Oliver rests on Saturday, but every Sunday he runs 5 km. How far does Oliver run in kilometres each week?

A: 40 km

B: 41 km

C: 37 km

D: 39 km

E: 35 km

47. $1 \text{ ml} = 1 \text{ cm}^3$. An empty tank measures $46 \text{ cm} \times 22 \text{ cm} \times 38 \text{ cm}$. How many litres of water can the tank hold?(Round to the nearest Integer)

A: 36 litres

B: 41 litres

C: 33 litres

D: 29 litres

E: 38 litres

48. Charles thinks of a number. First, he squares his number and then he adds 50 to the result. Finally, he divides that result by 5. Charles gets an answer of 12. What was Charles's original number?

A: 3

B: 9

C: 8

D: 1

E: 2

49. 44 tents need to be erected for a school fair. It takes 3 helpers 30 minutes to put up one tent. How many helpers will be required to put up all the tents if they have a 60-minute slot in which to set up?

A: 33

B: 51

C: 77

D: 66

E: 49

50. Henry works in a supermarket and is asked to stack boxes of crackers. The boxes are cubes that measure $10 \text{ cm} \times 10 \text{ cm} \times 10$. The floor space in which to stack the boxes is limited to $1 \text{ m} \times 1$, and Henry can go up to a maximum height of 4 m. What is the maximum number of boxes that Henry can put in the stack?

A: 4000

B: 4385

C: 4177

D: 4572

E: 3057

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Answer Sheet

1. C	2. D	3. C	4. E	5. B
6. B	7. B	8. D	9. A	10. A
11. D	12. C	13. A	14. A	15. E
16. C	17. E	18. C	19. E	20. B
21. B	22. D	23. C	24. D	25. D
26. B	27. B	28. B	29. A	30. D
31. C	32. C	33. C	34. A	35. C
36. E	37. E	38. C	39. E	40. A
41. D	42. B	43(a): D	43(b): E	43(c): B
43(d): A	44. D	45. A	46. E	47. E
48. A	49. D	50. A		

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