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**Product title:** Mathematics MCQ for Eleven Plus - HCF & LCM Topic Sample Sheet  
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Mathematics Sample Test

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## Questions

1. The HCF and LCM of two numbers are 8 and 168 respectively. If one number is 24, what is the other number?

- A: 48
- B: 56
- C: 72
- D: 84

2. If the LCM of 80 and 120 is  $x$  times their HCF, then what is the value of  $x$ ?

- A: 6
- B: 12
- C: 24
- D: 18

3. Four traffic lights blink every 60, 84, 108, and 180 seconds respectively. If they blink together at 7:30 am, after how many minutes will they all blink together again?

- A: 90
- B: 180
- C: 63
- D: 360

4. If the greatest possible length of a rope that can measure both 78 m and 130 m exactly is  $x$  meters, what is  $x$ ?

- A: 34
- B: 58
- C: 26
- D: 78

5. A box contains different sets of tennis balls: 140 in set A, 168 in set B, and 252 in set C. What is the largest number of boxes in which they can be equally distributed without splitting any set?

- A: 14

B: 21

C: 28

D: 56

**6.** A, B, and C jog around a circular track and take 24, 36, and 48 seconds respectively to complete one round. After how much time will they meet at the starting point again?

A: 288 seconds

B: 144 seconds

C: 72 seconds

D: 96 seconds

**7.** Which one of the following statements is always true for the HCF (H) and LCM (L) of any two positive integers a and b?

A:  $H \times L = a \times b$

B:  $H + L = a + b$

C:  $H \div L = a \div b$

D:  $L \div H = a \div b$

**8.** What is the HCF of 231 and 273?

A: 11

B: 7

C: 21

D: 13

**9.** The smallest number which when divided by 12, 16, 24, and 36 leaves a remainder of 7 in each case is:

A: 115

B: 151

C: 295

D: 303

**10.** If the LCM of two numbers is 180 and their HCF is 6, and the sum of the numbers is 66, what is the product of the two numbers?

- A: 900
- B: 1080
- C: 1188
- D: 540

11. The product of two numbers is 2028 and their HCF is 13. What is their LCM?

- A: 156
- B: 172
- C: 166
- D: 13

12. The HCF of two numbers is 23 and their LCM is 161. If one number is 23, what is the other?

- A: 23
- B: 69
- C: 161
- D: 161

13. The HCF of two consecutive odd numbers is:

- A: 1
- B: 2
- C: Cannot be found
- D: Their sum

14. The least common multiple of three numbers is 180. What could be the possible value of their greatest common divisor?

- A: 12
- B: 9
- C: 5
- D: Cannot be determined

15. Three bulbs blink at intervals of 36 seconds, 48 seconds, and 60 seconds respectively. If all three blink together at 9:00 AM, at what time will they next blink together?

- A: 9:12 AM
- B: 9:24 AM
- C: 9:30 AM
- D: 9:18 AM

**16.** Find the greatest number that will divide 43, 91, and 183 so as to leave the same remainder in each case.

- A: 6
- B: 8
- C: 9
- D: 4

**17.** Two pipes are set to fill a tank in 30 and 45 minutes respectively. If both are opened together, after how many minutes will they next turn on at the same instant if operated at regular intervals?

- A: 90
- B: 180
- C: 135
- D: 60

**18.** What is the smallest number that, when increased by 5, is exactly divisible by 12, 18, 21, and 30?

- A: 1255
- B: 155
- C: 3650
- D: 371

**19.** The least number, which when divided by 8, 12, 15, and 20, leaves a remainder of 7 in each case, is:

- A: 527
- B: 6071
- C: 600
- D: 1207

**20.** What is the minimum number of identical square tiles required to tile a rectangular floor of dimensions  $260\text{ cm} \times 144\text{ cm}$ , without cutting any tile?

- A: 1285
- B: 1800
- C: 2340
- D: 1504

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## Answer Sheet

1. B	2. A	3. C	4. C	5. C
6. B	7. A	8. C	9. B	10. B
11. A	12. C	13. A	14. D	15. A
16. D	17. A	18. A	19. A	20. C

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