

HCF and LCM, power, and exponents

Q1. The G.C.D. of 1.08, 0.36 and 0.9 is:

- (a) 0.03 (b) 0.9 (c) 0.18 (d) 0.108

Q2. The H.C.F. of two numbers is 23 and the other two factors of their L.C.M. are 13 and 14. The larger of the two numbers is:

- (a) 276 (b) 299 (c) 322 (d) 345

Q3. Six bells commence tolling together and toll at intervals of 2, 4, 6, 8, 10 and 12 seconds respectively. In 30 minutes, how many times do they toll together ?

- (a) 4 (b) 10 (c) 15 (d) 16

Q4. Three numbers are in the ratio of 3 : 4 : 5 and their L.C.M. is 2400. Their H.C.F. is:

- (a) 40 (b) 80 (c) 120 (d) 200

Q5. The product of two numbers is 1587. If the H.C.F. of these numbers is 23, then the greater number is:

- (a) 23 (b) 115 (c) 92 (d) None of these

Q6. The product of two numbers is 3468 and their H.C.F. is 17. The number of such pairs is:

- (a) 1 (b) 2 (c) 3 (d) 4

Q7. A, B and C start at the same time in the same direction to run around a circular stadium. A completes a round in 252 seconds, B in 308 seconds and C in 198 seconds, all starting at the same point. After what time will they again be at the starting point ?

- (a) 26 minutes and 18 seconds (b) 42 minutes and 36 seconds
(c) 45 minutes (d) 46 minutes and 12 seconds

Q8. Three numbers which are co-prime to each other are such that the product of the first two is 551 and that of the last two is 1073. The sum of the three numbers is:

- (a) 75 (b) 81 (c) 85 (d) 89

Q9. The LCM of two numbers is 864 and their HCF is 144. If one of the numbers is 288, the other number is:

- (a) 576 (b) 1296 (c) 432 (d) 144

Q10. The HCF and LCM of two numbers are 13 and 455 respectively. If one of the numbers lies between 75 and 125, then, that number is:

- (a) 78 (b) 91 (c) 104 (d) 117

Q11. The L.C.M. of two numbers is 48. The numbers are in the ratio 2 : 3. Then sum of the numbers is:

- (a) 28 (b) 32 (c) 40 (d) 64

Q12. If the sum of two numbers is 55 and the H.C.F. and L.C.M. of these numbers are 5 and 120 respectively, then the sum of the reciprocals of the numbers is equal to:

- (a) $\frac{55}{601}$ (b) $\frac{601}{55}$ (c) $\frac{11}{120}$ (d) $\frac{120}{11}$

Q13. The greatest number of four digits which is divisible by 15, 25, 40 and 75 is:

- (a) 9000 (b) 9400 (c) 9600 (d) 9800

Q14. The greatest number which on dividing 1657 and 2037 leaves remainders 6 and 5 respectively, is:

- (a) 123 (b) 127 (c) 235 (d) 305

Q15. Find the greatest number that will divide 43, 91 and 183 so as to leave the same remainder in each case.

- (a) 4 (b) 7 (c) 9 (d) 13

Q16. The least multiple of 7, which leaves a remainder of 4, when divided by 6, 9, 15 and 18 is:

- (a) 74 (b) 94 (c) 184 (d) 364

Q17. The least number which should be added to 2497 so that the sum is exactly divisible by 5, 6, 4 and 3 is:

- (a) 3 (b) 13 (c) 23 (d) 33

Q18. The least number which when divided by 5, 6, 7 and 8 leaves a remainder 3, but when divided by 9 leaves no remainder, is:

- (a) 1677 (b) 1683 (c) 2523 (d) 3363

Q19. The smallest number which when diminished by 7, is divisible 12, 16, 18, 21 and 28 is:

- (a) 1008 (b) 1015 (c) 1022 (d) 1032

Q20. If $(-3)^{m+1} \times (-3)^5 = (-3)^7$, then the value of m is:

- (a) 5 (b) 7 (c) 1 (d) 3

Q21. Find the multiplicative inverse of 5^{-3} .

- (a) 5^3 (b) $\frac{1}{5}$ (c) 5^2 (d) 5^{-2}

Q22. Which of the following is the value of $(4/5)^{-9} / (4/5)^{-9}$?

- (a) $(4/5)^{18}$ (b) $4/5$ (c) 1 (d) $(5/4)^9$

Q23. Which of the following is the standard form of 0.00001275?

- (a) 1.275×10^{-5} (b) 1.275×10^5 (c) 127.5×10^{-7} (d) 127.5×10^7

Q24. $[(1/2)^{-1} + (2/3)^2 - (3/4)^0]^{-2}$ is equal to:

- (a) $81/484$ (b) $81/169$ (c) $169/81$ (d) $16/81$

Q25. If $a \neq 0$, then the value of a^0 is

- (a) 0 (b) 1 (c) 2 (d) -1

Answer key

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| 1 | C | 6 | B | 11 | C | 16 | D | 21 | A |
| 2 | C | 7 | D | 12 | C | 17 | C | 22 | C |
| 3 | D | 8 | C | 13 | C | 18 | B | 23 | A |
| 4 | A | 9 | C | 14 | B | 19 | B | 24 | B |
| 5 | D | 10 | B | 15 | A | 20 | C | 25 | B |