H.C.F and L.C.M

1. Find the H.C.F. of 42, 63 and 140.

(a) 14 (b) 9

(c) 21 (d) 7

2. Find the H.C.F. of $a^2b^4c^6, b^3c^8a^4$ and $a^8b^6c^2$.

(a) $a^4b^4c^4$ (b) $a^2b^2c^2$

(c) $a^2b^3c^2$ (d) $a^2b^3c^3$

3. Find the H.C.F. of 0.63, 1.05 and 2.1

(a) 0.21 (b) 0.021

(c) 21 (d) 2.1

4. Find the H.C.F. of $2^3, 3^2, 4$ and 15.

(a) 2^3 (b) 3^2

(c) 1 (d) 360

5. Find the H.C.F. of $2^2\times3^3\times5^5, 2^3\times3^2\times5^2\times7$ and $2^4\times3^4\times5\times7^2\times11$ is:

(a) $2^2\times3^2\times5$ (b) $2^2\times3^2\times5\times7\times11$

(c) $2^4\times3^4\times5$ (d) $2^4\times3^4\times5^5\times7\times11$

6. Find the H.C.F. of $\frac{2}{3}, \frac{8}{9}, \frac{64}{81}$ and $\frac{10}{27}$

(a) $\frac{2}{3}$ (b) $\frac{2}{81}$

(c) $\frac{160}{3}$ (d) $\frac{160}{81}$

7. Find the L.C.M. of 24, 36 and 40.

(a) 120 (b) 240

(c) 360 (d) 480

8. Find the L.C.M. of 3, 2.7 and 0.09

(a) 2.7 (b) 0.27

(c) 0.027 (d) 27

9. Find the L.C.M. of $\frac{1}{3}, \frac{5}{6}, \frac{2}{9}$ and $\frac{4}{27}$

(a) $\frac{1}{54}$ (b) $\frac{10}{27}$

(c) $\frac{20}{3}$ (d) $\frac{40}{27}$

10. The greatest number that exactly divides 147, 168, 210 and 315 is-

(a) 7 (b) 21

(c) 441 (d) 4410

11. The maximum number of students among them 1001 pens and 910 pencils can be distributed in such a way that each student gets the same number of pens and same number of pens and same number of pencils is-

(a) 91 (b) 910

(c) 1001 (d) 1911

12. Find the greatest possible length of a scale that can be used to measure exactly the following length of cloth 3m, 5m 10cm and 12m 90cm.

(a) 30 cm (b) 60 cm

(c) 10 cm (d) 1290 cm

13. Find the greatest possible length of a scale to measure exactly the following lengths, 20 feet, 13 feet 9 inches, 17 feet, 6 inches and 21feet 3inches?

(a) 1 feet 6 inches (b) 1 feet 3 inches

(c) 9 inches (d) 2 feet 4 inches

14. Three containers have the mixture of milk and water. 403 litres, 713 litres and 496 litres respectively. Find the greatest measurement which can measure the mixture?

(a) 1 litre (b) 7 litre

(c) 31 litre (d) 41 litre

15. Find the minimum possibel length of scale to measure exactly the following lengths.

64 cm, 80 cm and 96 cm.

(a) 0.96 m (b) 9.60 m

(c) 19.20 m (d) 96 m

16. Traffic lights at three different points are changing respectively at 24, 48 and 72 second. If alll the three are changed together at 9 : 10 : 24 hours, then when will the next changes take place together?

(a) 9 : 12 : 25 hrs. (b) 9 : 10 : 48 hrs.

(c) 9 : 12 : 48 hrs. (d) 9 : 12 : 40 hrs

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

(a) 26 minutes 18 seconds

(b) 42 minutes 36 seconds

(c) 45 minutes

(d) 46 minutes 12 seconds

18. A, B and C start at the same time in the same direction to run around a circular stadium of length 12 km and speeds 3 km/h, 4 km/h and 6 km/h respectively. After what time will they meet again at the starting point?

(a) 16 h (b) 12 h

(c) 24 h (d) 28 h

19. The smallest number from which if 7 subtracted, is exactly divisible by 2, 4, 3, 5, 6, 8 and 10 is-

(a) 113 (b) 120

(c) 127 (d) 137

20. The smallest number from which if 8 added is exactly divisible by 10, 12, 15 and 20 is-

(a) 60 (b) 68

(c) 52 (d) 38

21. Which is the smallest number that can be subtracted from 1936 so that on being divided by 9, 10, 15 the remainder is 7 everytime?

(a) 93 (b) 46

(c) 76 (d) 39

22. The smallest number that will divide 4, 6, 8, 12 and 16 leaving a remainder 2 in each case is-

(a) 46 (b) 50

(c) 48 (d) 56

23. Find the greatest number that will divide 187, 233 and 279 so as to leave the same remainder in each case.

(a) 30 (b) 36

(c) 46 (d) 56

24. The numbers 2272 and 875 divided by a three digit number N, giving the same reaminder. The sum of the digits of N is-

(a) 13 (b) 10

(c) 14 (d) 11

25. The numbers 1305, 4665 and 6905 divided by a four digit number N, giving the same remainder. The sum of the digits of N is-

(a) 4 (b) 5

(c) 6 (d) 8

26. The greatest number which can divide 110 and 128 leaving the same remainder 2 in each case, is-

(a) 8 (b) 18

(c) 28 (d) 38

27. The greatest number which can dividing 122 and 243 leaves remainders 2 and 3 respectively, is-

(a) 12 (b) 24

(c) 30 (d) 120

28. The greatest number which on dividing 989 and 1327 leaves remainders 5 and 7 respectively, is-

(a) 8 (b) 53

(c) 24 (d) 32

29. The least number, which when divided by 12, 15 and 16 leaves 7, 10 and 11 as remainders respectively, is-

(a) 115 (b) 235

(c) 247 (d) 475

30. The least number, which when divided by 5, 6, 7 and 8 leaves a remainders 3, but divided by 9 leaves

no remainder, is-

(a) 1677 (b) 1683

(c) 2523 (d) 3363

31. The least number, which when divided by 20, 25, 35 and 40 leaves remainder 14, 19, 29 and 34 respectively, is-

(a) 1400 (b) 1394

(c) 1406 (d) 1388

32. Find the largest number of five digits exactly divisible by 12, 16, 18, 24, 32.

(a) 99936 (b) 99963

(c) 99972 (d) 99982

33. Find the smallest number of five digits exactly divisible by 16, 24, 36 and 54.

(a) 10432 (b) 10368

(c) 10064 (d) 10054

34. Find largest four-digit number which when divided by 12, 18, 21 and 24 leaves a remainder of 6 in each case, is-

(a) 9582 (b) 9423

(c) 9986 (d) 9982

35. The LCM of two numbers is 1296 and HCF is 96. If one of the numbers is 864 then the other is-

(a) 72 (b) 64

(c) 144 (d) 36

36. The H.C.F. of two numbers is 11 and their LCM is 7700. If one of the number is 275, then the other is:

(a) 279 (b)283

(c) 308 (d) 318

37. The L.C.M of two numbers is 495 and their H.C.F is 5. If the sum of the number is 100, then their difference is-

(a) 10 (b) 46

(c) 70 (d) 90

38. The product of the L.C.M and H.C.F of two numbers is 24. The difference of two numbers is 2. Find the numbers-

(a) 2 and 4 (b) 6 and 4

(c) 8 and 6 (d) 8 and 10

39. The L.C.M of two numbers is 45 times their H.C.F. If one of the numbers is 125 and the sum of H.C.F and L.C. M is 1150, the other number is-

(a) 215 (b) 220

(c) 225 (d) 235

40. Product of two co-prime numbers is 117. Their L.C.M should be-

(a) 1 (b) 117

(c) equal to HCF

(d) cannot bo calculated

41. The L.C.M of three different numbers is 120. Which of the following cannot be their HCF?

(a) 8 (b) 12

(c) 24 (d) 35

42. The H.C.F. of two numbers is 8. Which one the following can never be their LCM?

(a) 24 (b) 48

(c) 56 (d) 60

43. H.C.F. of 3240, 3600 and a third number is 36 and their LCM is $2^4 \times 3^5 \times 5^2 \times 7^2$. The third number is-

(a) $2^2 \times 3^5 \times 7^2$ (b) $2^2 \times 5^3 \times 7^2$

(c) $2^5 \times 5^2 \times 7^2$ (d) $2^3 \times 3^5 \times 7^2$

44. The sum of two numbers is 216 and their HCF is 27. The nubers are:

(a) 27, 189 (b) 108, 108

(c) 200, 16 (d) 100, 116

45. The ratio of two numbers is 3:4 and their HCF is 4. The numbers are-

(a) 9, 12 (b) 12, 16

(c) 16, 18 (d) 20, 24

46. The ratio of two numbers is 4:5 and their HCF is 2. The LCM is-

(a) 20 (b) 10

(c) 40 (d) 60

47. The ratio of two numbers is 2:3 and their LCM is 48. The number are-

(a) 16, 24 (b) 8, 6

(c) 12, 18 (d) 12, 24

48. The ratio of two numbers is 3:2 and their LCM is 72. Their HCF is-

(a) 24 (b) 3

(c) 6 (d) 12

49. The sum of two numbers is 36 and their HCF is 4. How many number of pairs may be possible-

(a) 1 (b) 2

(c) 3 (d) 4

50. A number when divided by 10 leaves a remainder 9, when divided by 9 leaves a remainder of 8, when divided by 8 leaves a remainder of 7,..... When divided by 2 leaves a remainder of 1. Find the number

(a) 31 (b) 1029

(c) 2519 (d) 1679

ANSWERS

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