LCM and HCF

Practice Exercise

1. LCM of 15 and 20 is
(a) 50 (b) 60 (c) 70 (d) 80

2. LCM of 12, 15, 20, 27 is
(a) 540 (b) 520 (c) 570 (d) 510

3. LCM of $(a^3 + b^3)$ and $(a^4 - b^4)$ is
(a) $(a^3 + b^3)(a + b)(a^2 + b^2)$
(b) $(a + b)(a^2 + ab + b^2)(a^3 + b^3)$
(c) $(a^3 + b^3)(a^2 + b^2)(a - b)$
(d) None of the above

4. LCM of $(x + 2)^2 (x - 2)$ and $x^2 - 4x - 12$ is
(a) $(x + 2)(x - 2)$ (b) $(x + 2)(x - 2)(x - 6)$
(c) $(x + 2)(x - 2)^2$ (d) $(x + 2)^2(x - 2)(x - 6)$

5. HCF of 6, 8, 12 is
(a) 1 (b) 2 (c) 3 (d) 4

6. HCF of 132, 204 and 228 is
(a) 12 (b) 18 (c) 6 (d) 21

7. The HCF of $x^2 - 9$ and $x^2 - 5x + 6$ is
(a) $(x + 3)(x + 2)$ (b) $(x - 3)(x + 2)$
(c) $(x + 3)(x - 2)$ (d) $(x - 2)(x - 3)$

8. The HCF of $2(x^2 - y^2)$ and $5(x^3 - y^3)$ is
(a) $(x - y)$ (b) $2(x^2 - y^2)$
(c) $(x + y)$ (d) None of these

9. If the HCF of $(p^2 - p - 6)$ and $(p^2 + 3p - 18)$ is $(p - a)$. The value of a is
(a) 2 (b) 3
(c) 4 (d) 5

10. The LCM of $\left(\frac{5}{2}, \frac{8}{9}, \frac{11}{14}\right)$ is
(a) 280 (b) 360 (c) 420 (d) 440

11. LCM of $\frac{1}{3}, \frac{2}{9}, \frac{5}{6}$ and $\frac{4}{27}$ is
(a) $\frac{1}{54}$ (b) $\frac{10}{27}$ (c) $\frac{20}{3}$ (d) $\frac{3}{20}$

12. The HCF of $\left(\frac{35}{12}, \frac{49}{30}, \frac{21}{20}\right)$ is
(a) $\frac{7}{60}$ (b) $\frac{7}{12}$ (c) $\frac{105}{60}$ (d) $\frac{105}{12}$

13. The HCF of $\frac{1}{2}, \frac{3}{4}$ and $\frac{4}{5}$ is
(a) $\frac{1}{20}$ (b) $\frac{1}{40}$
(c) 20 (d) 40

14. The LCM of 2.5, 1.2, 20 and 7.5 is
(a) 60 (b) 65
(c) 70 (d) 50

15. The product of HCF and LCM of 14 and 16 is
(a) 2 (b) 12
(c) 224 (d) 112

16. The LCM and HCF of two numbers are 4125 and 25, respectively. One number is 375. Find by how much is the second number less than the first?
(a) 50 (b) 25
(c) 75 (d) 100

17. The HCF and LCM of two numbers are 12 and 72, respectively. If the sum of two numbers is 60, then one of the two numbers will be
(a) 12 (b) 24
(c) 60 (d) 70

18. The LCM of any two numbers is twelve times of their HCF. The sum of their HCF and LCM is 403. If one number is 93, find the other number.
(a) 31 (b) 93 (c) 124 (d) 105

19. The HCF of two numbers is 8. Which one of the following can never be their LCM?
(a) 24 (b) 48
(c) 56 (d) 60

20. The product of two non-zero expressions is $(x + y + z)\,p^3$. If their HCF is p^2, then their LCM is
(a) $(y + z)\,p$ (b) $(z + x)\,p$
(c) $(x + y + z)\,p$ (d) $(x + y)\,p$

21. The GCD of the polynomials is $(x + 3)$ and their LCM is $(x^3 - 7x + 6)$. If one of the polynomials is $(x^2 + 2x - 3)$, then the other is
(a) $(x^2 + x - 6)$ (b) $(x^2 - x + 6)$
(c) $(x^2 + x + 6)$ (d) None of these

22. The smallest 3-digit number, which is exactly divisible by 6, 8 and 12, is
(a) 120 (b) 105
(c) 130 (d) 110

23. The least number which when divided by 6, 15 and 18 leave remainder 5 in each case, is
(a) 95 (b) 90
(c) 85 (d) 97

24. The least number which when divided by 24, 32 and 36 leaves the remainders 19, 27 and 31 respectively, is
(a) 360 (b) 140
(c) 280 (d) 283

25. What will be the greatest number that divides 1023 and 750 leaving remainders 3 and 2 respectively?
(a) 60 (b) 68 (c) 65 (d) 62

26. Three brands A, B and C of biscuits are available in packets of 12, 15 and 21 biscuits, respectively. If a shopkeeper wants to buy an equal number of biscuits of each brand, what is the minimum number of packets of each brand, he should buy?
(a) 35, 28, 20 (b) 30, 28, 33
(c) 20, 28, 37 (d) 33, 35, 42

27. In a school, all the students can stand in a row, so that each row has 5, 9 or 10 students. The least number of students in the school is
(a) 90 (b) 60
(c) 80 (d) 70

28. Five bells begin to toll together at intervals of 9 s, 6 s, 4 s, 10 s and 58 s, respectively. How many times will they toll together in the span of 1 h?
(a) 10 (b) 9
(c) 15 (d) 12

29. Find the largest number which divides 1305, 4665 and 6905. Leaving same remainder in each case.
(a) 1210 (b) 1130 (c) 1120 (d) 1210

30. Three tankers contain 403 L, 434 L and 465 L of diesel, respectively. The maximum capacity of a container, that can measure the diesel of the three containers exact number of times, is
(a) 32 L (b) 31 L (c) 30 L (d) 33 L