Square and Cube Roots

Practice Exercise

1. The value of $(301)^2 - (300)^2$ is
(a) 1 (b) 601 (c) 106 (d) 100

2. If a number is increased by two times, then the square of the number will increase
(a) two times (b) three times
(c) four times (d) five times

3. Which of the following cannot be a digit in the unit place of a perfect square ?
(a) 0 (b) 1 (c) 5 (d) 7

4. $\sqrt{12} + \sqrt{24}$ is equal to
(a) $2\sqrt{3} + 3\sqrt{2}$ (b) $4\sqrt{3} + \sqrt{6}$
(c) $\sqrt{7} + 2\sqrt{3}$ (d) $2\sqrt{3} + 2\sqrt{6}$

5. The value of $\dfrac{\sqrt{80} - \sqrt{112}}{\sqrt{45} - \sqrt{63}}$ is
(a) $\frac{3}{4}$ (b) $1\frac{3}{4}$ (c) $1\frac{1}{3}$ (d) $1\frac{7}{9}$

6. If $x = \sqrt{3018 + \sqrt{36 + \sqrt{169}}}$, then the value of x is
(a) 55 (b) 44
(c) 63 (d) 42

7. What is that fraction which when multiplied by itself gives 227.798649 ?
(a) 15.093 (b) 15.099 (c) 14.093 (d) 9.0019

8. The number of digits in the square root of 298116 is
(a) 4 (b) 5 (c) 3 (d) 6

9. The square root of 73.96 is
(a) 8.6 (b) 86
(c) 0.86 (d) None of these

10. The value of $\sqrt{\dfrac{16}{36} + \dfrac{1}{4}}$ is
(a) $\frac{2}{5}$ (b) $\frac{1}{3}$ (c) $\frac{5}{3}$ (d) $\frac{5}{6}$

11. In a triplet $(6, a, 10)$ what value of 'a' will make it a Pythagorean triplet ?
(a) 4 (b) 16 (c) 8 (d) 5

12. The value of $\sqrt{6 + \sqrt{6 + \sqrt{6 + \ldots}}}$ is
(a) $6\frac{2}{3}$ (b) $3\frac{1}{2}$ (c) 3 (d) 6

13. A General arranges his soldiers in rows to form a perfect square. He finds that in doing so, 60 soldiers are left out. If the total number of soldiers be 8160. Then, the number of soldiers in each row is
(a) 90 (b) 91 (c) 92 (d) 80

14. The greatest six-digit number which is a perfect square is
(a) 998004 (b) 998006
(c) 998049 (d) 998001

15. The least number to be added to 269 to make it a perfect square is
(a) 31 (b) 16 (c) 17 (d) 20

16. The least number which is added to 17420 will make it a perfect square is
(a) 3 (b) 5 (c) 9 (d) 4

17. The smallest square number divisible by each of the numbers, 8, 12, 15 is
(a) 3600 (b) 9000 (c) 4200 (d) 100

18. Which of the following perfect cube is the cube of an even number ?
(a) 343 (b) 2197
(c) 216 (d) 1331

19. The value of $\sqrt[3]{\dfrac{27}{125}}$ is
(a) $\frac{3}{5}$ (b) $\frac{3}{25}$
(c) $\frac{9}{25}$ (d) not appropriate data

20. $(-216 \times 729)^{1/3}$
(a) 54 (b) -54
(c) -45 (d) 45

21. The cube root of $\dfrac{-343}{1331}$ is
(a) $\frac{7}{11}$ (b) $\frac{-7}{11}$ (c) $\frac{11}{7}$ (d) $\frac{-11}{7}$

22. The value of $\frac{\sqrt[3]{1728} - \sqrt[3]{729}}{\sqrt[3]{2197} + \sqrt[3]{2744}}$ is

(a) $\frac{21}{27}$ (b) $-\frac{1}{9}$ (c) $\frac{1}{9}$ (d) $\frac{27}{21}$

23. The value of $\sqrt[3]{0.064} + \sqrt[3]{27} - \sqrt[3]{729}$ is

(a) 12.4
(b) −2
(c) 5.6
(d) −5.6