SOLUTIONS TO NUMERICAL ABILITY TEST

1. 4;? = $\sqrt{1521} \div 3 \times 12 = \frac{39}{3} \times 12 = 156$

2. 5;? = 672 ÷ 24 × 18 + 153 – 345
   = 28 × 18 + 153 – 345 = 312

3. 1;? = $850 \times \frac{26}{100} \times \frac{3}{4} = 165.75$

4. 2; ∵ 144 ÷ 8 ÷ ? = 9

   $\Rightarrow \frac{144}{8 \times ?} = 9$

   $\therefore ? = \frac{144}{8 \times 9} = 2$

5. 3; ∵ $590 \times \frac{?}{100} - 11.8 = 236$

   $\Rightarrow 5.9 \times ? = 236 + 11.8$

   $\therefore ? = \frac{247.8}{5.9} = 42$

6. 1;Required Value $= 480 \times \frac{60}{100} \times \frac{3}{4} = 216$

7. 4;Average height $= \frac{146+154+164+148+158}{5} = \frac{770}{5} = 154$ cm

8. 3;Required amount = Rs (25×45 + 12×28)
   = Rs (1125 + 336=) 1461

9. 1;1 man + 1 woman + 1 boy $= \left(5 + \frac{5}{3} + 1\right)$ boys $= \left(\frac{23}{3}\right)$ boys

   ∴ required number of days = $\left(\frac{5 \times 46 \times 3}{23} =\right)$ 30 days

10. 4;∵ Length of the rectangle $= \left(\frac{1}{2} \times 60 - 12 =\right)$ 18 cm

    ∴ Area of the rectangle = (18 × 12 =) 216 sq cm

11. 1; ∵ $? \times \frac{(8)^2}{100} = 723 + 45$

    $\Rightarrow 0.64 \times ? = 768$

    $\therefore ? = \frac{768}{0.64} = 1200$

12. 4;? + 2525 = 5554 – 333 + 45
    ∴ ? = 5266 – 2525 = 2741

13. 2;? = $3\frac{1}{4} + 2\frac{1}{2} + 6\frac{1}{6} = (3 + 2 + 6) + \left(\frac{1}{4} + \frac{1}{2} + \frac{1}{6}\right) = 11 + \left(\frac{3+6+2}{12}\right) = 11\frac{11}{12}$

14. 5; ∵ $(?)^2 = (450 \div 30)^2 - (12)^2 = (15)^2 - (12)^2 = 225 - 144 = 81 = (9)^2$
    ∴ ? = 9

15. 2;? = 56.73 + 32.88 + 45.23 = 134.84

16. 2;∵ Speed of the train $= \left(\frac{1230}{5} =\right)$ 246 km/hr

    ∴ Speed of the truck $= \left(\frac{1}{3} \times 246 =\right)$ 82 km/hr

17. 2;? = $\sqrt{343} = 18.52 \approx 18$

18. 3;Sen's monthly income $= \text{Rs}\left(\frac{775200}{12} =\right)$ 64600

Let the monthly income of Anita be Rs. x.

$\therefore$ Bina's monthly income $= \text{Rs}\left(\frac{90 \times x}{100} =\right)$ 0.9x

Now, according to the question,

$x + 0.9x = 64600$

$\Rightarrow x = \text{Rs}\left(\frac{64600}{1.9} =\right)$ 34000

$\therefore$ Bina's monthly income = 34000 × 0.9 = Rs 30600

19. 5; Number of L type products sold by

Store F = 48

Store E = 40

Required percentage $= \frac{48}{40} \times 100 = 120$

20. 5;Required ratio = (61 + 54) : (54 + 48) = 115 : 102

21. 2;Average price $= \text{Rs}\frac{(16+15+14.5+15.6+18.2+14.9) \times 10^3}{6} = \text{Rs}\ \frac{94.2}{6} \times 10^3 = \text{Rs}\ 15700$

22. 1;Required difference = Rs (60 × 75 - 44 × 15) × 10^3 = Rs (4500 - 660) × 10^3 = Rs 38.4 lakhs

23. 4;Required total amount earned by selling both products M and O by store C =
Rs (57 × 5.6 + 48 × 50) × 10^3 = Rs (319.2 + 2400) × 10^3 = Rs 27.192 lakhs

24. 4;Length of the platform is not given.

25. 3;Let the number be x.

Now, according to the question,

$x \times \frac{3}{4}x = 10800$

$\Rightarrow x^2 = 10800 \times \frac{4}{3} = 14400$

$\therefore x = \sqrt{14400} = 120$

26. 4;Let the number be x.

Now, according to the question,

$x - \frac{3x}{4} = 163$

$\therefore x = 163 \times 4 = 652$

27. 5;Required Compound Interest = Rs 35000 $\left[\left(1+\frac{8}{100}\right)^2 - 1\right]$

= Rs 35000 $\left[\frac{108 \times 108 - 10000}{10000}\right]$

= Rs. $\frac{35000 \times 1664}{10000}$ = Rs 5824

28. 4;1 × 7 = 7

7 × 7 = 49

49 × 7 = 343

343 × 7 = 2401

29. 4;13 + 2^2 + 3 = 20

$20 + 4^2 + 3 = 39$

$39 + 6^2 + 3 = 78$

$78 + 8^2 + 3 = 145$

$145 + 10^2 + 3 = 248$

30. 1;$12 \times 2 + 11 = 35$

$35 \times 2 + 11 = 81$

$81 \times 2 + 11 = 173$

$173 \times 2 + 11 = 357$

$357 \times 2 + 11 = 725$

31. 5;$3 + 97 = 100$

$100 + 197 = 297$

$297 + 297 = 594$

$597 + 397 = 991$

$991 + 497 = 1488$

32. 3;$112 + 7 \times 1 = 119$

$119 + 7 \times 3 = 140$

$140 + 7 \times 5 = 175$

$175 + 7 \times 7 = 224$

$224 + 7 \times 9 = 287$

33. 5;Maximum marks $= \frac{100 \times 208}{40}$ = Rs 520

34. 3;Let the lowest number be x.
Now, according to the question,
x+(x+1)+(x+2)+(x+3.)+(x+4) = 190
$\Rightarrow$ 5x + 10 = 190

$\Rightarrow x = \frac{190-10}{5} = \frac{180}{5} = 36$

$\therefore$ Required sum = 36 + 40 = 76

35. 1;$\because$ Area of the square = 2 × 392 = 784 sq cm

$\therefore$ Length of the side of the square = $\sqrt{784}$ = 28 cm