

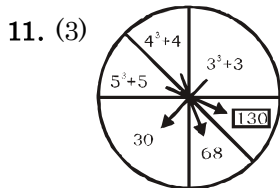
ANSWER SET - 37

1. (2) 2. (3) 3. (1) 4. (1) 5. (1)
6. (3) 7. (2) 8. (3) 9. (4) 10. (2)
11. (3) 12. (1) 13. (1) 14. (2) 15. (2)
16. (3) 17. (4) 18. (3) 19. (2) 20. (3)
21. (4) 22. (2) 23. (4) 24. (1) 25. (4)
26. (4) 27. (4) 28. (4) 29. (4) 30. (2)
31. (3) 32. (3) 33. (3) 34. (3) 35. (4)
36. (1) 37. (3) 38. (3) 39. (3) 40. (1)
41. (2) 42. (3) 43. (2) 44. (1) 45. (2)
46. (3) 47. (4) 48. (3) 49. (2) 50. (4)
51. (3) 52. (1) 53. (1) 54. (2) 55. (1)
56. (3) 57. (2) 58. (4) 59. (3) 60. (3)
61. (3) 62. (4) 63. (3) 64. (4) 65. (4)
66. (2) 67. (1) 68. (4) 69. (4) 70. (2)
71. (3) 72. (1) 73. (3) 74. (2) 75. (3)
76. (2) 77. (3) 78. (4) 79. (1) 80. (4)
81. (4) 82. (3) 83. (2) 84. (3) 85. (3)
86. (1) 87. (3) 88. (3) 89. (1) 90. (2)
91. (2) 92. (1) 93. (2) 94. (2) 95. (2)
96. (3) 97. (4) 98. (1) 99. (1) 100. (4)

EXPLANATION - 37

1. (2) Cure is treatment of Disease in the same way Heal is referred as treatment of an Injury.
2. (3) Pesticide protects the plants and vaccination protects the babies.
3. (1) $6 + 3 = 9$ in same way $6 + 8 = 14$
4. (1) Except Book all are stationary items.
5. (1) Except Barber all use raw material.
6. (3) AG = Difference = 6
WA = Difference = 22
ET = Difference = 15
IQ = Difference = 08
Difference between ET is odd number.
7. (2) Repair → Rescue →
2 5
Research → Residue → Resign
4 3 1
8. (3)

1	9	17	33	49	73	97
	+8	+8	+16	+16	+24	+24
9. (4) $2 + 5 = 7$
 $5 + 7 = 12$
 $7 + 12 = 19$
 $12 + 19 = 31$
10. (2) abc/ cba/ abc/ cba/ abc



12. (1) $\frac{4}{2} + 2^3 = 10$

$\frac{6}{2} + 4^3 = 67$

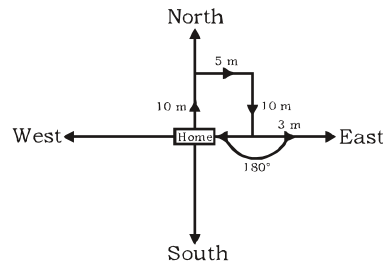
$\frac{10}{2} + 3^3 = 32$

13. (1) $3 + 2 + 10 + 5 = \frac{20}{2} = 10 =$
middle number in figure.

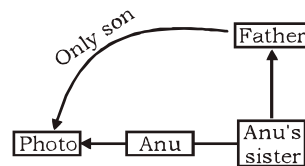
$4 + 7 + 6 + 3 = \frac{20}{2} = 10 =$ middle
number in figure.

So that $4 + 8 + 3 + 5 = \frac{20}{2} = 10$

14. (2)

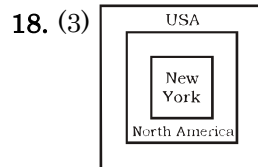


15. (2)

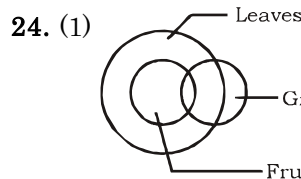


So, Photo is Anu's brother.

16. (3) 29 February means it is a leap year and in a leap year the month February and August month have the same calendar. So, on 29th August it is Monday.
17. (4) $\Rightarrow 12 \div 6 - 3 \times 20 + 8$
 $\Rightarrow 2 - 60 + 8$
 $\Rightarrow -50$



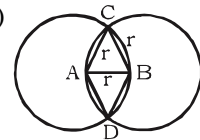
19. (2)
20. (3)
21. (4)
22. (2)
23. (4)



Only conclusion I follow.

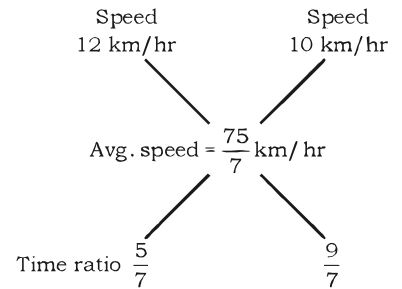
25. (4)

51. (3)



$\triangle ABC$ & $\triangle ABD$ are equilateral triangles,
 $AB = AC = BC = BD = AD = r$
 $\angle DBC = \angle CBA + \angle DBA$
 $= 60^\circ + 60^\circ$
 $= 120^\circ$

52. (1)



So, ratio = 5 : 9
(5 + 9) unit = 7 hr
14 unit = 7 hr

1 unit = $\frac{7}{14}$

5 unit = $\frac{7}{14} \times 5 = \frac{35}{14}$

Total distance cover at 12 km/hr
 $= 12 \times \frac{35}{14} = 30$ km

53. (1) $(a^2 + 2a)^2 + 12(a^2 + 2a) - 45$
Let $(a^2 + 2a) = x$
 $= x^2 + 12x - 45$
 $= x^2 + 15x - 3x - 45$
 $= x(x + 15) - 3(x + 15)$
 $= (x - 3)(x + 15)$
Put the value of x
 $(a^2 + 2a - 3)(a^2 + 2a + 15)$
 $= (a^2 + 3a - a - 3)(a^2 + 2a + 15)$
 $= \{a(a + 3) - 1(a + 3)\}(a^2 + 2a + 15)$
 $= (a - 1)(a + 3)(a^2 + 2a + 15)$

54. (2) A : B
5 : 4

Total profit is 100% but 90% profit is shared between them as 10% goes to charity.
5 unit = 7500

9 unit = $\frac{7500}{5} \times 9$

9 unit = 90%

$\therefore 90\% = \frac{7500}{5} \times 9$

$\therefore 100\% = \frac{7500}{5 \times 90} \times 9 \times 100$

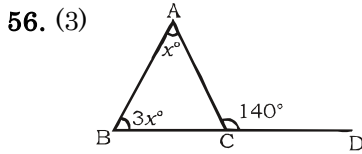
= ₹ 15,000

55. (1) Upstream speed, $U = \frac{2}{2}$
= 1 km/hr

Downstream speed, $D = \frac{1}{3}$

= 3 km/hr
Speed of boat in still water
= $\frac{D+U}{2} = \frac{3+1}{2} = 2$ km/hr

So, required time = $\frac{5}{2}$ hr = 2 hr
30 min



$\angle A + \angle B = 140^\circ$
 $x + 3x = 140^\circ$
 $4x = 140^\circ$
 $x = 35^\circ$

$\angle A = 35^\circ$

57. (2) $3 \times 8 \times 2 = 4 \times x \times 1$
 $x = 12$ hr

58. (4) L.C.M of 3, 5, 7, 8 = 840
840) 28523 (34
 2520
 3323
 3360
 - 37

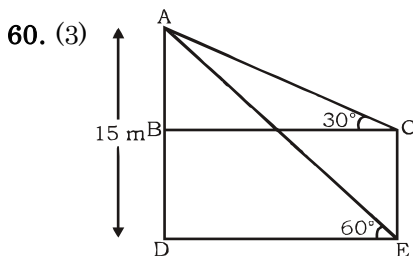
So, 37 is the least number which should be added.

59. (3) $\sin 2(A + B - C) = 1$
 $2(A + B - C) = 90$
 $A + B - C = 45^\circ$... (i)

$\tan (B + C - A) = \sqrt{3}$
 $B + C - A = 60^\circ$... (ii)

Solving (i) and (ii) equation
 $A + B - C = 45^\circ$
 $B + C - A = 60^\circ$
 $2B = 105^\circ$

$\angle B = \angle B = 52.5^\circ$



In $\triangle ADE$

$\tan 60^\circ = \frac{AD}{DE}$

$DE = \frac{AD}{\tan 60^\circ}$

$DE = \frac{15}{\sqrt{3}}$

$DE = BC = \frac{15}{\sqrt{3}}$ m

In $\triangle ABC$

$\tan 30^\circ = \frac{AB}{BC}$

$AB = BC \cdot \tan 30^\circ$

$AB = \frac{15}{\sqrt{3}} \times \frac{1}{\sqrt{3}}$ m

$AB = 5$ m

Height of electric pole $CE = AD - AB$
= $15 - 5 = 10$ m

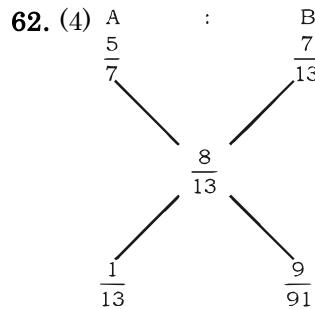
61. (3) C.P of article = $900 \times \frac{60}{100}$

= ₹ 540

S.P of retailer = ₹ 900

% gain = $\frac{360}{540} \times 100 = \frac{400}{6}$

= $\frac{200}{3} = 66\frac{2}{3}\%$



So ratio 7 : 9

63. (3) $8 : 30 = 6 : x$
 $x = 40$ min.

64. (4) $x^2 + 4x + 3 = 0$
 $x^2 + 3x + x + 3 = 0$
 $(x + 3)(x + 1) = 0$
 $x = -3, -1$

So put $x = -1$ in $\frac{x^3}{x^6 + 27x^3 + 27}$

= $\frac{-1}{1 + 27(-1)^3 + 27}$

= $\frac{-1}{1 - 27 + 27} = -1$

65. (4) Let the marked price of both article is x, y respectively.

According to question:

$\frac{x \times 15}{100} = \frac{y \times 20}{100}$

$\frac{x}{y} = \frac{4}{3} = \frac{80}{60}$

66. (2) Let number be x

$x \times 10\% = \frac{x}{10}$ $x \times 25\% = \frac{4}{x}$

$x \times 50\% = \frac{2}{x}$ $x \times 75\% = \frac{3x}{4}$

\Rightarrow Average =

$\frac{\frac{x}{10} + \frac{x}{4} + \frac{x}{2} + \frac{3x}{4}}{4} = 24$

$\frac{2x + 5x + 10x + 15x}{4} = 24$

= $\frac{32x}{2} = 96$

$32x = 96 \times 20$

$x = \frac{96 \times 20}{32} = 60$

67. (1)

Interest = $\frac{\text{Principal} \times \text{Time} \times \text{Rate}}{100}$

$929.20 = \frac{P \times 5 \times 8}{100}$

$P = \frac{929.20 \times 100}{5 \times 8}$

$P = ₹ 2323$

68. (4) Let age of Heer be H
age of Ranjha be R

$H \times R = 240$

$(H + 4) + (R - 10) = 25$

$H + R - 6 = 25$

$H + R = 31$... (i)

$(H + R)^2 - (H - R)^2 = 4RH$

$961 - 4 \times 240 = (H - R)^2$

$961 - 960 = (H - R)^2$

$H - R = 1$... (ii)

Solving eqn. (i) and (ii)

$H + R = 31$

$H - R = 1$

$\frac{+}{-}$

$2R = 30$

$R = 15$ (Age of Ranjha)

69. (4)

	24 (total work)
A	→ 6 4
B	→ 8 3

with help of C they can do work in 3 days

= $\frac{24}{A+B+C} = \frac{24}{4+3+x} = 3$

∴ x = 1 (efficiency of C)

∴ 24 unit = 32,000

$$\therefore 1 \text{ unit} = \frac{32,000}{24}$$

$$\therefore 3 \text{ unit} = \frac{32,000}{24} \times 3 = ₹ 4000$$

70. (2) $1 + 2 \sec^2 A \cdot \tan^2 A - \sec^4 A - \tan^4 A$
 $= 1 - (\sec^4 A + \tan^4 A - 2 \sec^2 A \cdot \tan^2 A)$
 $= 1 - (\sec^2 A - \tan^2 A)^2$
 $= 1 - (1)^2$
 $= 0$

71. (3) Perimeter of equilateral $\Delta =$
Perimeter of square
 $3a = 4r$
 $9a^2 = 16r^2$

$$\frac{a^2}{r^2} = \frac{16}{9}$$

$$\frac{\text{Area of equilateral } \Delta}{\text{Area of square}} = \frac{\frac{\sqrt{3}}{4} a^2}{r^2}$$

$$= \frac{\frac{\sqrt{3}}{4} \times 16}{9} = 4 : 3\sqrt{3}$$

72. (1) Required answer

$$= ₹ 10,000 \times \frac{1}{3} \times \frac{15}{100 \times 100}$$
$$= ₹ 5$$

73. (3) Maximum profit = 4.5

Minimum loss = 1

ratio = 9 : 2

74. (2) Total loss = (1.5 + 1) = ₹ 2.5
lakh

75. (3) $2.5 = x\% (2.5 + 3.5 + 4.5 + 2)$
 $2.5 = x\% 12.5$

$$x\% = \frac{2.5}{12.5}$$

$$x = \frac{2.5}{12.5} \times 100 = x = 20$$

76. (2) The subject of the sentence is 'The Prime Minister', hence singular in nature. Change 'have' into 'has'.

77. (3) Change 'on' into 'in'. This is a phrase which means every sad or difficult situation has a positive side.