SSC EXAM RELATED MATHEMATICS

Answers with Explanation

1. (c) $\frac{2}{3}\pi r_1^3 = 4.\frac{4}{3}\pi r_2^3$

$\Rightarrow r_2^3 = \frac{1}{8} r_1^3$

$\Rightarrow r_2 = \frac{1}{2} r_1$

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2. (b) L.C.M. (3, 5, 3) = 15
$3 \rightarrow 40 \quad 5 \rightarrow 60$
$15 \rightarrow 200 \quad 15 \rightarrow 180$
Total C.P. = 200 + 180 = 380
$3 \rightarrow 50$
$3 \rightarrow 500$ (S.P.)

Profit% $= \frac{500-380}{380} \times 100\%$
= 31.57% = 32%

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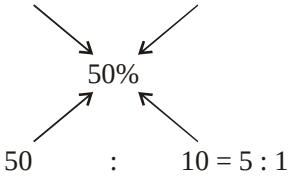
3 (b) Average $= \frac{4\times 85 + 5\times 87}{4+5} = 86.1$

4. (b) cot41°.cot42°.cot43°.cot44°.cot45°.cot46°.cot47°.cot48°.cot49°
= cot(90° – 49°).cot(90° – 48°).cot(90° – 47°).cot(90° – 46°).cot45°.cot46°.cot47°.cot48°.cot49°
= tan49°.tan48°.tan47°.tan46°.cot45°.cot46°.cot47°.cot48°.cot49°
= 1.1.1.1.1 = 1 [$\because$ cot45° = 1 and tanθ.cotθ = 1]

5. (b) New average $= \frac{na + 2 + 4 + 8 + 16 + ... + 2^n}{n}$

$= \frac{na + 2\left(\frac{2^n - 1}{2-1}\right)}{n} = a + 2.\frac{2^n - 1}{n}$

6. (b) 40% 100%



50% 50 : 10 = 5 : 1

$5 \rightarrow 300$

$1 \rightarrow \frac{300}{5} = 60$ gm.

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7. (a) 60% of A = 30% of B

$\Rightarrow A = \frac{1}{2}B$ ..... (i)

B = 40% C ..... (ii)
C = x% of A ..... (iii)

(i) $A = \frac{1}{2} \times 40\%\ C$

$\Rightarrow A = \frac{1}{2} \times 40\%$ x% of A

$\Rightarrow x = 500$

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8. (b) $\frac{x^2}{100}\%$ decreased = 4% decreased

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9. (c) $x = \frac{\sqrt{13} + \sqrt{11}}{\sqrt{13} - \sqrt{11}}$

$y = \frac{1}{x}$

$\therefore x = \frac{24+2}{2}\sqrt{13\times 11}$

$= 12 + \sqrt{13\times 11}$

$y = 12 - \sqrt{13\times 11}$

$\therefore$ x + y = 24
$3x^2 - 5xy + 3y^2$
$= 3x^2 + 6xy + y^2 - 11xy$
$= 3 \times 24^2 - 11$
= 1717

10. (b) $\frac{90}{54} = \frac{120}{x}$

$\Rightarrow x = ₹72$

11. (c) $7\sin^2\theta + 3\cos^2\theta = 4 \Rightarrow 7\sin^2\theta + 3 - 3\sin^2\theta = 4$

$\Rightarrow 4\sin^2\theta + 3 = 4 \Rightarrow \sin^2\theta = \frac{1}{4}$

$\Rightarrow \sin^2\theta = \frac{1}{2} = \sin 30° \Rightarrow \theta = 30°$

$\therefore \tan\theta = \tan 30° = \frac{1}{\sqrt{3}}$

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12. (b) $\Delta GBC = \frac{60}{3} = 20\ cm^2$

13. (a) Let the distance be D km.

$$\frac{\frac{1}{4}D}{10}+\frac{\frac{3}{4}D}{12}=7$$

$$\Rightarrow \frac{D}{40}+\frac{D}{16}=7$$

$$\Rightarrow \frac{2D+5D}{80}=7$$

$$\Rightarrow 7D=7\times 80$$

$$\therefore D=80 \text{ km}$$

14. (a) $I=Pt\frac{r}{100}$

$$\Rightarrow \frac{8}{25}=P\times\frac{r^2}{200}$$

$$\Rightarrow r=8$$

15 (c) 80% of cost price = 300

$$\therefore \text{Cost price } =\frac{300}{80}\times 100 = ₹\ 375$$

Now, SP = ₹ 405

$$\therefore \text{Profit percentage } =\frac{405-375}{375}\times 100$$

$$=\frac{30}{375}\times 100=8\%$$

16 (c) $\frac{4}{3}\pi(1)^3+\frac{4}{3}\pi(6)^3=\frac{4}{3}\pi(9)^3-\frac{4}{3}\pi(r)^3$

$$\Rightarrow 1+216=729-r^3$$

$\Rightarrow r^3 = 512 = 8^3$

Thickness = 9 – 8 = 1 cm

17. (c) 0.67 – 0.33 = 0.34

18. (c) Let a = b = c = 1

$\therefore a^2b^2c^2 = 1$

19. (d) Let $\theta = 45^\circ$

$$\therefore \frac{\tan 60^\circ}{\tan 30^\circ}=3$$

20. (b) 40% × 30% + 60% 50%

= 12% + 30%

= 42%

21. (a) $2 \rightarrow 5$

$8 = 2^3 \rightarrow 3 \times 5 = 15$ year

22. (a) $x^2 + y^2 = a^2 + b^2$

23. (b) $\frac{162}{2x+8}=6$

$$\Rightarrow x=9\frac{1}{2} \text{ km/h}$$

24. (c) $V=\sqrt{5(5-a)(5-b)(5-c)}\ h$

$$=\sqrt{27\times 14\times 7\times 6}\times 9$$

$$=\sqrt{3\times 3\times 3\times 2\times 7\times 7\times 2\times 3}\times 9$$

$$=3\times 3\times 2\times 7\times 9 = 1134 \text{ cm}^3$$

25. (b) $\frac{3}{4}:\frac{2}{5}$

15 : 8

26. (a) $12600\times\frac{95}{100}\times\frac{98}{100}=₹\ 11730.60$

27. (d) $a-3-\frac{1}{a-3}=2$

$$=\frac{330}{\sqrt{\left(2+\sqrt{3}\right)^2}-\sqrt{\left(\sqrt{3}+1\right)^2}}=\frac{330}{2+\sqrt{3}-\sqrt{3}-1}$$

= 8

$$\Rightarrow (a-3)^3-\frac{1}{(a-3)^3}=3\times 2+8=14$$

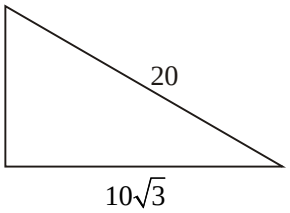
28. (d) $\frac{6^2+7^2+8^2+9^2+10^2}{\sqrt{7+4\sqrt{3}}-\sqrt{4+2\sqrt{3}}}$

$$=\frac{36+49+64+81+100}{\sqrt{2^2+\left(\sqrt{3}\right)^2+2.2.\sqrt{3}}-\sqrt{\left(\sqrt{3}\right)^2+1^2+2.1.\sqrt{3}}}$$

$$=\frac{330}{\sqrt{\left(2+\sqrt{3}\right)^2}-\sqrt{\left(\sqrt{3}+1\right)^2}}=\frac{330}{2+\sqrt{3}-\sqrt{3}-1}$$

= 330

29. (a) 10



= height = 10 + 20 = 30

30. (d) 7 × 1 = 7

31. (c) 90 × 16 × 12 × W = 70 × 24 × 8 × 1

$$\Rightarrow W=\frac{70\times 24\times 8\times 1}{90\times 16\times 12}=\frac{7}{9}$$

32. (a) Total S.A. $= \frac{1}{2} \times 4 \times 10 \times \sqrt{5^2 + 12^2} + 10^2$

$= \frac{1}{2} \times 4 \times 10 \times 13 + 100$

= 260 + 100 = 360 cm^2

33. (c) Let x = y = z অ্যাচিভার্স

$$\frac{3x^4 + 7y^4 + 5z^4}{5x^2y^2 + 7y^2z^2 + 3z^2x^2}$$

$$= \frac{3+7+5}{5+7+3} = 1$$

34. (a) $A + A \times 2 \times \frac{5}{100} = B + B \times 3 \times \frac{5}{100}$

$= C + C \times 4 \times \frac{5}{100}$ অ্যাচিভার্স

$\Rightarrow 22A = 23B = 24C = K$

$\Rightarrow A = \frac{K}{22}, B = \frac{B}{23}, C = \frac{K}{24}$

$A + B + C = 7930$

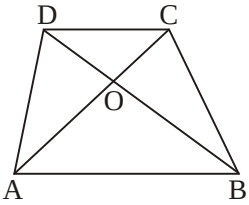
$\Rightarrow K = 11 \times 23 \times 24 \times 10$

$\therefore A = \frac{K}{22} = \frac{11 \times 23 \times 24 \times 10}{22}$

= 23 × 12 × 10 = 2760

35. (d) Let CD = x

∴ AB = 2x



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Now, $\frac{\text{Area of } \Delta AOB}{\text{Area of } \Delta COD} = \frac{AB^2}{CD^2}$

$\Rightarrow \text{Area of } \frac{84}{\Delta COD} = \frac{4x^2}{x^2}$

$\therefore \text{Area of } \Delta COD = \frac{84}{4} = 21 \text{ cm}^2$

36. (c) Speed of downstream = $\frac{60}{7.5}$ × 1 = 8 km/h

Speed of upstream = 5 km/h

∴ Speed of boat in still water

$= \frac{8+5}{2} = \frac{13}{2} = 6\frac{1}{2}$ km / h অ্যাচিভার্স

37. (c) We have, A : B = 2 : 3

B : C = 3 : 7

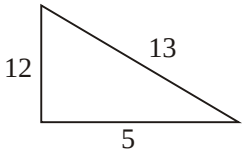
∴ A : B : C = 2 : 3 : 7 অ্যাচিভার্স

Let A = 2K, B = 3K and C = 7K

∴ A + B : B + C : C + A = (2K + 3K) : (3K + 7K) : (7K + 2K)

= 5K : 10K : 9K = 5 : 10 : 9

38. (b) $\sin\theta = \frac{12}{13}$



39. (a) $x = \sqrt{a} + \frac{1}{\sqrt{a}}, y = \sqrt{a} - \frac{1}{\sqrt{a}}$ অ্যাচিভার্স

$x^2 = a + \frac{1}{a} + 2$

$y^2 = a + \frac{1}{a} - 2$

$\left(x^2 - y^2\right)^2 = 4^2 = 16$

40. (d) $(a+b)^3 - 3ab(a+b) - ab - (a+b)^2(a-b)^2$

$= 1 - 3ab - ab - a^2 - b^2 + 2ab$ অ্যাচিভার্স

$= 1 - 4ab + 2ab - \left\{(a+b)^2 - 2ab\right\} = 0$

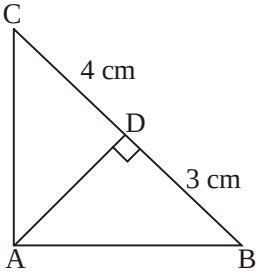
41. (c) $m\% - n\% - \frac{mn}{100} = 10 - 10 - \frac{10 \times 10}{100} = -1\%$ loss

42. (d) Given, $\sin A + \sin^2 A = 1$

$\therefore \sin A = 1 - \sin^2 A = \cos^2 A$

Now, $\cos^2 A + \cos^4 A = \cos^2 A + \sin^2 A = 1$

43. (b) C



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$AD = \sqrt{BD \times CD} = \sqrt{4 \times 3} = 2\sqrt{3}$ cm

44. (c) Volume of ditch = 48 × 16.5 × 4

Volume of stone = $\pi(2)^2$ × 56

∴ Portion to filled

$$= \frac{\frac{22}{7}\times 4\times 56}{48\times 16.5\times 4} = \frac{100}{450} = \frac{2}{9} \text{ part}$$

45. (a) $4-\cfrac{5}{1+\cfrac{1}{3+\cfrac{1}{2+\frac{1}{4}}}} = 4-\cfrac{5}{1+\cfrac{1}{3+\frac{4}{9}}} = 4-\cfrac{5}{1+\frac{9}{31}}$

$$= 4-\frac{5\times 31}{40} = \frac{32-31}{8} = \frac{1}{8}$$

46. (d) Let the exterior angle be x.
$\therefore$ Interior angle = x + 108°
$\because$ x + x + 108° = 180° $\Rightarrow$ 2x = 72°
$\Rightarrow$ x = 36°
$\therefore$ Number of sides $= \frac{360°}{36°} = 10$

47. (d) Let the number = N = 361k + 47
When k = 1, then N = 408
$\therefore \frac{N}{19} = \frac{408}{19} = 9$

48. (b) Radius of cylinder = 8 cm and height = 2 cm
$\therefore$ Volume of cylinder = Volume of cone
$\Rightarrow \pi \times 8 \times 8 \times 2 = \frac{1}{3}\pi r^2 \times 6 \Rightarrow r^2 = 8 \times 8$
$\Rightarrow$ r = 8 cm = Radius of cone

49. (a) Let the distance of D km.

$$\therefore \frac{D}{5}-\frac{D}{6} = \frac{12}{60} \Rightarrow \frac{6D-5D}{30} = \frac{12}{60}$$

$\Rightarrow$ D = 6 km

50. (d) Let the total work = LCM of (16, 32, 48) = 96 units
$\therefore$ A's work = 6 units/day, B's work = 3 units/day and C's work = 2 units/day
Let the work be finished in x days.
$\therefore$ 6x + 3(x – 8) + 2(x – 6) = 96
$\Rightarrow$ 6x + 3x – 24 + 2x – 12 = 96
$\Rightarrow$ 11x = 132
$\Rightarrow$ x = 12 days

51. (c) $\frac{x+y}{x-y} = \left(\frac{3+2}{3-2}\right) = 5 \therefore 5:1$

52. (b) Given, 50% of x = 30% of y

$$\Rightarrow \frac{x\times 50}{100} = \frac{y\times 30}{100}$$

$\Rightarrow$ 50x = 30y
$\Rightarrow$ 5x = 3y
$\Rightarrow$ x : y = 3 : 5

53. (c) $\frac{1}{\sqrt{2}+1}+\frac{1}{\sqrt{3}+\sqrt{2}}+.....+\frac{1}{\sqrt{9}+\sqrt{8}}$

$$= \sqrt{2}-1+\sqrt{3}-\sqrt{2}+.....+\sqrt{9}-\sqrt{8}$$

$$= \left(\sqrt{9}-1\right) = (3-1) = 2$$

54. (a) Let the number be x

$$x^2 - 25 = (x-25)^2$$

Put the option (a); then L.HS = RHS
Then; answer is 13

55. (c) Given, number of armies member = 36562
Now,

	191
1	$\overline{3}\,\overline{65}\,\overline{62}$
1	1
29	265
	261
381	462
	381
	81

Thus, after arrangement 81 armies were left.

56. (c) 72 = 9 × 8 ($\because$ The question is in positive mode; then we should take maximum value) = 9

57. (b) Let Cow = x; hen = y
x+y = 180 $\rightarrow$ (i) 4x+2y = 420 $\rightarrow$ (ii)
$\therefore$ 2x+2y = 360 $\rightarrow$ (iii)
$\therefore$ (ii) - (iii) $\rightarrow$ 2x = 60
x = 30

58. (b) 6 can be written in the form of n(n + 1) (n + 2)
Let n = 1
Then,
6 = 1(1 + 1)(1 + 2)

59. (d) $(11111)^2 = 123454321$

60. (b) Earn/day $= \left(\frac{2000}{50}\right) = ₹40$

Now $\rightarrow$ Extra hours

$$= \frac{(2300-2000)}{(40+20)} = \left(\frac{300}{60}\right) = 5 \text{ hrs.}$$

61. (a) $\frac{8\times 4}{12}\times 60 = 160$ mins.

62. (c) In $\rightarrow$ 1 hr. $\rightarrow$ x can copy $= \left(\frac{80}{20}\right)$ pages

= 4 pages
$\therefore$ In $\rightarrow$ 1 hr. $\rightarrow$ (x+y) can copy

$= \left(\frac{135}{27}\right)$ pages = 5 pages

∴ y can copy 1 page in 1 hr

∴ 20 page → 20 hrs.

63. (a) Let the CP of the motorcycle be ₹100x

∴ For Mr. x $= \left(90x \times \frac{108.5}{100}\right)$ and

For Mr. y $= \left(108.5x \times \frac{90}{100}\right)$

∴ Same as the amount Mr. y paid

64. (b) $Z = \left(x - y - \frac{xy}{100}\right) = 25 - 10 - \left(\frac{25 \times 10}{100}\right)$

$= 12.5\%$

65. (c) Price of each window

$= \left[\left\{\left(120000 \times \frac{3}{4}\right) - 7500\right\} \div 25\right]$

= (82500 ÷ 25) = ₹3300

66. (d) A : B = 3 : 2

B : C = 3 : 5

A : B : C = 9 : 6 : 10

(A + B) : (B + C) = 15 : 16

67. (b) A : B

$\left(x \times 10\right) + \left(\frac{3x}{4} \times 2\right)$ $\left(\frac{x}{2} \times 8\right) + \left(\frac{x}{4} \times 4\right)$

$\left(10 + \frac{3}{2}\right) : 5$

23 : 10

68. (c) A B C

$(3 \times 12) : (5 \times 12) : (5 \times 6)$

= 6 : 10 : 5

69. (c) $63x^2 = 1575 \Rightarrow x^2 = 25 \Rightarrow x = 5$

∴ Max. no = 9x = (9 × 5) = 45

70. (d) Let the avg. of all 12 person be x kg.

∴ (11×95) + (x+33) = 12x

$\Rightarrow x = \left(\frac{1078}{11}\right) = 98$

∴ (98 + 33) = 131 kg.

71. (c) According to the question, Largest number formed = 420

Smallest number formed = 204

∴ Required Average $= \frac{420 + 204}{2} = \frac{624}{2} = 312$

72. (d) $\frac{3^{30} + 3^{60} + 3^{90}}{3} = \frac{3^{30}\left(1 + 3^{30} + 3^{60}\right)}{3}$

$= \left(3^{29} + 3^{59} + 3^{89}\right)$

73. (c) Let CP $= \left(\frac{100}{80} \times 100x\right)$ $\left[\because \text{MRP} = 100x\right]$

Now, Profit $= \left(100x - \frac{250x}{4}\right) = \frac{150x}{4}$

∴ Profit(%) $= \left(\frac{150x}{4} \times \frac{4}{250x} \times 100\right)\% = 60\%$

74. (b) Overall profit = 20%

∴ CP of mixture = $= \left(\frac{100}{120} \times 320\right) = ₹\left(\frac{800}{3}\right)$

(A) 180 (B) 280

$\frac{800}{3}$

$\frac{800}{3} - 280$: $\frac{800}{3} - 180$

40 : 260

= 2 : 13

75. (d) $\frac{Q}{P} = \frac{96}{112} \Rightarrow Q : P = 6 : 7$

76. (b) $\left(\frac{100 \times 100}{120 \times 75} \times P\right) = ₹\frac{10}{9}P$

77. (c) $\left[\left(\frac{30 - 25}{25}\right) \times 100\right]\% = \left(\frac{5}{25} \times 100\right)\% = 20\%$

78. (c) Let use/day = 100x litrs.

$\therefore \left(\frac{3500x}{140x}\right) = 25$ days

79. (d) Let the greatest possible price be ₹x and the discount value is maximum

∴ By the condition $= \frac{3x}{4} = 270 \Rightarrow x = 360$

80. (b) $\frac{4\times16}{16-4}=\frac{4\times16}{12}=5\frac{1}{3}$ hrs.

81. (a) $P=\left(\frac{100\times1\times365}{5\times1}\right)=₹\,7300$

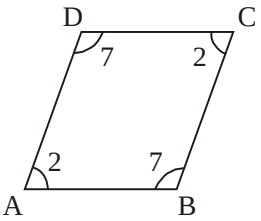
82. (c) Let the principal be ₹100x
$\therefore$ Interest = (10 + 10 + 1)% = 21%
$\therefore$ 121x = 2420
$\Rightarrow$ x = 20 $\Rightarrow$ 100x = ₹2000

83. (b) Value of the ball $=\frac{4}{3}\pi CC$

84. (d) $C=2\pi r\Rightarrow r=\frac{C}{2\pi}$ and $h=4C$

$$V=\pi r^2h=\left(\pi.\frac{C^2}{4\pi}\times4C\right)=\frac{C^3}{\pi}$$

85. (b) opposite angle same = Rhombus



Rhombus

86. (d) $\left[\left(\frac{728}{2}\right)-\left(\frac{700}{2}\right)\right]=(364-350)m=14m$

87. (a) Side of square
$=\left(2\times\frac{22}{7}\times84\times\frac{1}{4}\right)cm=132$ cm.

88. (c) Area increased = (5 + 5 + 0.25) = 10.25%

89. (b) $A_2:A_1=\left(\frac{3x}{2}\right)^2:x^2=\frac{9}{4}:1=9:4$

90. (d) $\frac{3-5x}{2x}+\frac{3-5y}{2y}+\frac{3-5z}{2z}=0$

$$\Rightarrow\frac{3}{2x}+\frac{3}{2y}+\frac{3}{2z}-\left(\frac{5}{2}\times3\right)=0$$

$$\Rightarrow\frac{1}{x}+\frac{1}{y}+\frac{1}{z}=\left(\frac{15}{2}\times\frac{2}{3}\right)$$

$$\Rightarrow\frac{2}{x}+\frac{2}{y}+\frac{2}{z}=10$$

91. (b) $(p+m)^3-3.pm(p+m)=72$

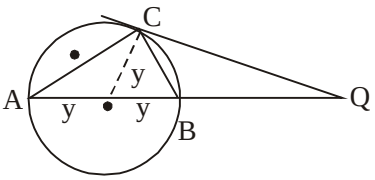
$\Rightarrow 6^3-18pm=72$

$\Rightarrow pm=\left(\frac{216-72}{18}\right)=\left(\frac{144}{18}\right)=8$

92. (b) $x^m.x^n=1\Rightarrow x^{m+n}=x^0\Rightarrow m+n=0$
$\Rightarrow m=-n$

93. (d) $\therefore k=2k-1\Rightarrow k=1$

94. (c)



$\angle CAB=34^o$
CO = OA = radious
$\therefore\angle AC=34^o$

$$\therefore\angle CAB=\frac{\left[180^o=(34\times2)\right]}{2}=\left(\frac{112}{2}\right)=56^o$$

95. (c) $2\sin^2\theta=3\cos\theta$
$2(1-\cos^2\theta)=3\cos\theta$
$\Rightarrow 2-2\cos^2\theta=3\cos\theta$
$\Rightarrow 2\cos^2\theta+3\cos\theta-2=0$

$$\Rightarrow\cos\theta=\frac{-3\pm\sqrt{9+16}}{4}=\frac{-3\pm\sqrt{25}}{4}$$

Taking +ve sign, $\cos\theta=\frac{-3+5}{4}=\frac{2}{4}=\frac{1}{2}$

$\Rightarrow\theta=60°$

96. (c) Given, $3(\sec^2\theta+\tan^2\theta)=5$
$\Rightarrow 3(1+\tan^2\theta+\tan^2\theta)=5$ ($\because \sec^2\theta=1+\tan^2\theta$)
$\Rightarrow 3+6\tan^2\theta=5$
$\Rightarrow 6\tan^2\theta=2$

$$\Rightarrow\tan\theta=\frac{1}{\sqrt{3}}$$

$\Rightarrow\theta=30°$

$$\therefore\cos2\theta=\cos60°=\frac{1}{2}$$

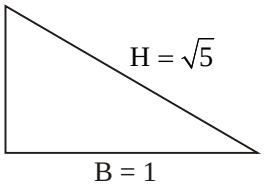
97. (d) $x.\cos^2 60^o\sin 60^o=\frac{\tan^2 45^o.\sec 60^o}{\operatorname{cosec}60^o}$

$$\Rightarrow x.\left(\frac{\sqrt{3}}{2}\right)^2.\frac{\sqrt{3}}{2}=\frac{(1)^2.2}{\frac{2}{\sqrt{3}}}$$

$$\Rightarrow x.\frac{3}{4}.\frac{\sqrt{3}}{2}=\sqrt{3}$$

$$\Rightarrow x=\frac{8}{3\sqrt{3}}.\sqrt{3}=2\frac{2}{3}$$

98. (a) P = 2



$\therefore \ \text{cosec}\alpha = \frac{\sqrt{5}}{2}$ and $\sec\alpha = \frac{\sqrt{5}}{1}$ অ্যাচিভার্স

$\therefore$ Putting the value of $\text{cosec}\alpha$ and $\sec\alpha$

$$= \frac{\left(\frac{\sqrt{5}}{2}\right)^2 - \left(\sqrt{3}\right)^2}{\left(\frac{\sqrt{5}}{2}\right)^2 + \left(\sqrt{5}\right)^2} = \frac{\left(\frac{5}{4} - 5\right)}{\left(\frac{5}{4} + 5\right)}$$

$$= \left(\frac{-\frac{15}{4}}{\frac{25}{4}}\right) \Rightarrow -\left(\frac{15}{4} \times \frac{4}{25}\right) = -\frac{3}{5}$$ অ্যাচিভার্স

99. (d) $\text{Sin}\left(0 + 30^\circ\right) = \frac{3}{\sqrt{12}} = \frac{\sqrt{3}}{2}$ $\left[\because \text{Sin}60^\circ = \frac{\sqrt{3}}{2}\right]$

$\Rightarrow \text{Sin}\left(0 + 30^\circ\right) = \text{Sin}60^\circ$ অ্যাচিভার্স

$\Rightarrow \theta + 30^\circ = 60^\circ \Rightarrow \theta = 30^\circ$

$\therefore \text{Cos}^2\theta = \text{Cos}^2 30^\circ = \left(\frac{\sqrt{3}}{2}\right)^2 = \frac{3}{4}$

100. (a) Angel shown by the students who go to institute on foot

= 360° – (216° + 54° + 18°) অ্যাচিভার্স

= 360° – 288° = 72°

$\therefore$ Required number of students

$$= \frac{72^\circ}{360^\circ} \times 800 = 160$$

★★★