TEST NO. 50 SSC Mains (Maths) Answer with Explanation

1. (A) $4^{3.5} : 2^5$

$= (2^2)^{3.5} : 2^5 = 2^7 : 2^5$

$= 2^2 : 1$

$= 4 : 1$

2. (D) Now,

Required ratio = T.S.A of one small cube : T.S.A of the big cube

$= 6 \times (1)^2 : 6 \times (5)^2$

$= 1 : 25$

3. (B) Money left = 100% – (80% + 6% of 20%)

= 100% – 81.2%

= 18.8% of total pocket money

And,

18.8% of total pocket money = 47 paise

$= ₹ \frac{47}{100}$

So, Total pocket money

(i.e 100%) $= ₹ \frac{47}{100} \times \frac{100}{18.8} = ₹ 2.5$

4. (B) Total C.I in 2 years @ 12.5% p.a

= 12.5% + 12.5% + 12.5% of 12.5% of sum

$= 25\% + \frac{12.5}{8}\%$ of sum

$= \frac{212.5}{8}\%$ of sum

= ₹ 510

So,

Total S.I in 2 years @ 12.5% p.a

= (2 × 12.5%) of the sum

= 25% of the sum

$= \frac{510 \times 8}{212.5} \times 25 = ₹ 480$

5. (C) Let x = initial C.P of the article.

	C.P		S.P
1st condition	x	$\xrightarrow{20\% \text{ loss}}$	$0.8x$
2nd condition	x	$\xrightarrow{5\% \text{ profit}}$	$0.8x + 100 = 10.5x$

$\Rightarrow 1.05x = 0.8x + 100$

$\Rightarrow x = \frac{100}{0.25} = 400$

6. (D) Total S.I = (3 × 12)% of the principal amount

= 36% of the principal amount

= ₹ 5400

So, The principal amount (i.e 100%)

$= ₹ \frac{5400}{36} \times 100 = ₹ 15000$

7. (C) Required distance

$= \frac{\text{Average Speed} \times \text{Total Time}}{2}$

$= \frac{\frac{2 \times (5+1)(5-1)}{(5+1)+(5-1)} \times 1}{2}$ km

$= \frac{4.8}{2}$ km = 2.4 km

8. (D) Money spent on article

= 25% of total amount

Money spent on cloths

= 10% of remaining (75%) amount

= 7.5% of total amount

= (25% + 7.5%) of total amount + ₹ 531.25

= Total amount – ₹ 8000

= Total (100%) amount – 32.5% of total amount = ₹ 8000 + 531.25

= ₹ 8531.25

$\Rightarrow$ 67.5% of the total amount = ₹ 8531.25

So,

Money spent on clothes

i.e 7.5% of the total amount

$= \frac{8531.25}{67.5} \times 7.5 = ₹ 948$

9. (D) Required time $= \frac{60 \times 40}{60 - 40}$ minutes

$= \frac{2400}{20}$ minutes

= 120 minutes

10. (A) $\frac{x^2 + y^2 + xy}{x^3 - y^3} = \frac{1}{x - y}$

$[\because (x^3 - y^3) = (x - y)(x^2 + y^2 + xy)]$

$= \frac{1}{19 - 18} = \frac{1}{1} = 1$

11. (A) (0.5 × 5 + 0.25 × 0.5 + 0.5 × 4 + 0.5 × 0.75)

= 2.5 + 0.125 + 2 + 0.375

= 5

12. (D) A : B : C

1 : 2 : 3 [Average = $\frac{1+2+3}{3}$ = 2]

$\therefore$ Average = 600 $\Rightarrow$ 2 $\cong$ 600

So, A : B : C
1 : 2 : 3
300 600 900

Now,

A $\xrightarrow{+10\%}$ 300 + 30 = 330 (new value of A)

B $\xrightarrow{+10\%}$ 600 – 120 = 480 (new value of B)

Average $\xrightarrow{+5\%}$ 600+30=630 (new average)

Now,

$\Rightarrow \frac{330 + 480 + \text{new value of C}}{3} = 630$

= new value of C (630 × 3) – (330 + 480) = 1080

= Increase in C = 1080 – 900 = 180

13. (D) 116 – 92 = 24

Let x = profit when S.P = 92

i.e $3x - x$ = 24

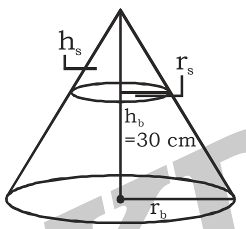
So, $3x$ = profit when S.P = 116

$\Rightarrow x$ = 12

$\Rightarrow$ When S.P = 92, profit = ₹ 12

So, C.P = 92 – 12 = ₹ 80

14. (D)



here, $\left[\because \frac{r_b}{r_s} = \frac{h_b}{r_s}\right]$

Volume of smaller cone = $\frac{\text{vol. of bigger cone}}{27}$

i.e. $\frac{1}{3}\pi(r_s)^2(h_s) = \frac{\frac{1}{3}\pi(r_b)^2(h_b)}{27}$

or, $(r_s)^2(h_s) = \frac{(r_b)^2(h_b)}{27}$

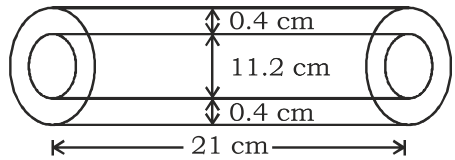
$\Rightarrow \frac{(r_b)^2(h_b)}{(r_s)^2(h_s)} = 27$

or, $\frac{r_b \times r_b \times h_b}{r_s \times r_s \times h_s} = \frac{3 \times 3 \times 3}{1 \times 1 \times 1}$

or, $\frac{h_b}{h_s} = \frac{3}{1} \Rightarrow h_s = \frac{h_b}{3} = \frac{30}{3}$ = 10 cm

$\Rightarrow$ The required height above the base, = (30 – 10) cm = 20 cm

15. (C)



Volume of metal = External volume of cylindrical tube – Internal volume of cylindrical tube

$= \pi(r_{ex})^2 h - \pi(r_{in})^2 h = \pi h\{(r_{ex})^2 - (r_{in})^2\}$

$= \pi h\left\{\left(\frac{12}{2}\right)^2 - \left(\frac{11.2}{2}\right)^2\right\}$

$= \frac{22}{7} \times 21 \times (36 - 31.36)$

= 22 × 3 × 4.64 = 306.24 cm^3

16. (B) 1 ÷ [1 + 1 ÷ {1 + 1 ÷ (1 + 1 ÷ 2)}]

$= 1 \div \left[1 + 1 \div \left\{1 + 1 \div \left(1 + \frac{1}{2}\right)\right\}\right]$

$= 1 \div \left[1 + 1 \div \left\{1 + 1 \times \left(\frac{2}{3}\right)\right\}\right]$

$= 1 \div \left[1 + 1 \div \left\{\left(\frac{5}{3}\right)\right\}\right] = 1 \div \left[1 + \frac{5}{3}\right]$

$= 1 \div \frac{8}{5} = 1 \times \frac{5}{8} = \frac{5}{8}$

17. (B) L.C.M for 4, 6, 10 and 15 = 60

N will be in form of N = 60n + 2

Now,

least six digit number of form 60n (i.e divisible by 60) = 100020

So,

$\Rightarrow$ least six digit number of form N = 100020 + 2 = 100022

$\Rightarrow$ Sum of digits of N = 1+0+0+0+2+2 = 5

18. (A) Present age of son = x years

Present age of father = $3x$ + 3 years

After 3 years, son = x + 3 years

father = $3x$ + 3 + 3
= $3x$ + 6 years

A.T.Q,

$3x + 6 = 2(x + 3) + 10$

$3x + 6 = 2x + 6 + 10$

$3x - 2x = 10$

$x = 10$

Father's present age = 3 × 10 + 3
= 33 years

19. (C) A B C $\leftarrow$ Let the three co-prime numbers

A.T.Q, A × B = 551 and B × C = 1073

And 19 × 29 = 551 and 29 × 37 = 1073

$\Rightarrow$ A = 19, B = 29 and C = 37

$\Rightarrow$ Sum of three numbers = 19 + 29 + 37
= 85

20. (C)

	₹ 500	Required Sum
Rate of interest	12%	10%
S.I after 4 yrs	480	480

S.I is same

$\Rightarrow \frac{500}{\text{Required Sum}} = \frac{10\%}{12\%}$

$\Rightarrow \frac{500}{\text{Required Sum}} = \frac{5}{6}$

$\Rightarrow$ Required sum = ₹ $\frac{500}{5} \times 6$ = ₹ 600

21. (B) Total ages of 40 students = 40 × 15
= 600 years
Let the average age of 10 new students
= x years

$= \frac{600 + 10x}{50} = 15.2$

$= 600 + 10x = 15.2 \times 50$

$= 600 + 10x = 760$

$x = \frac{760 - 600}{10} = \frac{160}{10} = 16$ years

22. (B) $T_1 = \frac{24}{6} = 4$ hours, $T_2 = \frac{24}{8} = 3$ hours

$T_3 = \frac{24}{12} = 2$ hours

Average speed = $\frac{24 + 24 + 24}{4 + 3 + 2} = \frac{72}{9}$
= 8 km/h

23. (B) Radius of the shot put ball = 7cm

Height of the cylinder = $\frac{7}{3}$ cm

Volume of the shot put = Volume of the cylinder

$\frac{4}{3}\pi \times 7^3 = \pi \times R^2 \times \frac{7}{3}$

$R^2 = \frac{\frac{4}{3}\pi \times 7^3 \times \frac{3}{7}}{\pi}$

$R = \sqrt{4 \times 7^2} = 2 \times 7 = 14$ cm

D = 2R = 2 × 14 = 28 cm

24. (D) $h = 1 + \frac{25}{100}$ m $= \frac{5}{4}$ m

Total area of the wet surface
= Area of the cistern without top
= 2[lb + bh + lh] – lb

$= 2\left[6 \times 4 + 4 \times \frac{5}{4} + 6 \times \frac{5}{4}\right] - 24$

$= 2\left[24 + 5 + \frac{30}{4}\right] - 24$

$= 2\left[\frac{29 \times 4 + 30}{4}\right] - 24$

$= 2 \times \frac{146}{4} - 24 = 73 - 24 = 49$ m^2.

25. (C) $\left(\sqrt[3]{3.5} + \sqrt[3]{2.5}\right)\left\{\left(\sqrt[3]{3.5}\right)^2 - \sqrt[3]{8.75} + \left(\sqrt[3]{2.5}\right)^2\right\}$

$= \left(\sqrt[3]{3.5}\right)^3 + \left(\sqrt[3]{2.5}\right)^3$

[by using $(a + b)(a^2 - ab + b^2) = a^3 + b^3$]

= 3.5 + 2.5 = 6

26. (A) Total CP = CP + repairing charge
= 1200 + 200 = ₹ 1400
S.P = ₹ 1680

% of profit = $\frac{(1680 - 1400) \times 100}{\text{CP}}$

$= \frac{280 \times 100}{1400} = 20\%$

27. (D) Let x = the larger number
and y = the smaller number
Now,
$x - y = 2395$ ....(i)

and $\frac{x}{y}$; Quotient = 7 and remainder = 25

$\Rightarrow x = 7y + 25$ ....(ii)

Now on putting value of y from (i) in (ii) we get,

$x = 7(x - 2395) + 25$

$x = 7x \;\; 16765 + 25$

$6x = 16765 - 25$

$\Rightarrow x = \frac{16740}{6} = 2790$

28. (A) $\sqrt[3]{4} + \sqrt[3]{16} + 1 = \sqrt[3]{2 \times 2} + \sqrt[3]{2 \times 8} + 1$

$= (\sqrt[3]{2} \times \sqrt[3]{2}) + (2 \times \sqrt[3]{2} \times 1) + (1 \times 1)$

$= (\sqrt[3]{2})^2 + (2 \times \sqrt[3]{2} \times 1) + (1)^2$

$= (\sqrt[3]{2} + 1)^2$

So, square root of $(\sqrt[3]{4} + \sqrt[3]{16} + 1)$

i.e $(\sqrt{\sqrt[3]{4} + \sqrt[3]{16} + 1}) = \sqrt[3]{2} + 1$

29. (C) $\frac{0.7 \times 0.7 \times 0.7 + 0.3 \times 0.3 \times 0.3 \times 0.3 \times 0.7 \times 3}{0.7 \times 0.7 + 0.3 \times 0.3 + 0.42}$

$= \frac{0.7 \times 0.7 \times 0.7 + 0.3 \times 0.3 \times 0.3 \times 3 \times 0.7 \times 0.3 \times 1}{0.7 \times 0.7 + 0.3 \times 0.3 + 2 \times 0.7 \times 0.3}$

$= \frac{(0.7)^2 + (0.3)^2 + 0.3 \times 0.7 \times 0.3 \times (0.7 + 0.3)}{(0.7)^2 + (0.3)^2 + 2 \times 0.7 \times 0.3}$

$= \frac{(0.7 + 0.3)^2}{(0.7 + 0.3)^2} = \frac{1^3}{1^2} = \frac{1}{1} = 1$

30. (B) A + C = $\frac{22}{37}$ part

$\Rightarrow$ B = $1-\frac{22}{37}$ part = $\frac{15}{37}$ part

And,

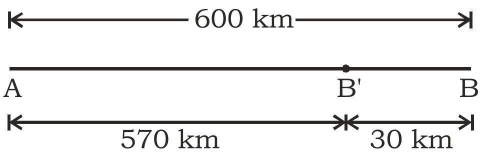
B + C = $\frac{21}{37}$ part

or $\frac{15}{27}+C=\frac{21}{37} \Rightarrow C=\frac{21}{37}-\frac{15}{37}=\frac{6}{37}$ part

So,

Wage of C = $\frac{6}{37}\times 9250$ = ₹ 1500

31. (A)



Distance covered by B before movement of A i.e. Distance covered by B in 20 minutes

= $\left(90\times\frac{20}{60}\right)$ km = 30 km

$\Rightarrow$ When train from station A starts to move; the other train will be at B' and distance between A & B

(600 – 30) km= 570 km

Now,

Relative speed of trains

= (100 + 90) km/hr

= 190 km /hr

So, Time taken by each train to reach each other = $\left(\frac{570}{190}\right)$ hr = 3 hours

And in 3 hours, distance travelled by A

= (100 × 3)km = 300 kms

$\Rightarrow$ Both train will cross each other at a distance 300 kms and from A i.e at the exact middle point of A and B.

32. (C) Let x = no. of girls

So,

600 ×11 years 9 months

= x × 11 years + (600 – x) × 12 years

$\Rightarrow$ 7050 years = (11x + 7200 – 12x) years

$\Rightarrow$ x = 7200 – 7050 = 150

33. (D) 1st no. : 2nd no. and 2nd no. : 3rd no.

= 3 : 2   3 : 2

$\Rightarrow$1st no. : 2nd no. : 3rd no.

= 9 : 6 4

So, Let the no, are 9x, 6x and 4x

A.T.Q, $(9x)^2 + (6x)^2 + (4x)^2 + 532$

$\Rightarrow 133x^2 = 532$

$\Rightarrow x = 2$

So, the 2nd no. i.e 6x = 6 × 2 = 12

34. (B) We know that,

$5^2 + 12^2 = 13^2$ ....(i)

$5^{\sqrt{x}} + 12^{\sqrt{x}} = 13^{\sqrt{x}}$ ....(ii)

from equation (i) and (ii)

$\sqrt{x} = 2 \Rightarrow x = 4$

35. (C) 20% discount on L.P – 25% discount on L.P = ₹ 500

$\Rightarrow$ 80% value of L.P – 75% value of L.P = ₹ 500

$\Rightarrow$ 5% value of L.P = ₹ 500

$\Rightarrow$ L.P (i.e 100%) = ₹ $\frac{500\times 100}{5}$ = ₹ 10000

So, Tarun bought the TV at 80% of L.P

= ₹ $\frac{80}{100}\times 10000$ = ₹ 8000

36. (B) SI@ 3% p.a for 4 years = 12% of sum

SI@ 2% p.a for 5 years = 10% of sum

A.T.Q,

(12% – 10%) of sum = ₹ 150

$\Rightarrow$ 2% = 150

$\Rightarrow$ sum = $\frac{150\times 100}{2}$ = ₹ 7500

37. (C)

	S.I	**C.I**
For 1st year	₹ 135	₹ 135
For 2nd years	₹ 135	₹ 162 = 135 + 27

Now,

if r = rate of interest per annum

$\Rightarrow$ r % of 135 = 27

$\Rightarrow r = \frac{27\times 100}{135} = 20$

Also,

$\Rightarrow$ 20% of the sum = 135

$\Rightarrow$ sum = $\frac{135\times 100}{20}$ = ₹ 675

38. (B) A.T.Q,

$P\left(1+\frac{20}{100}\right)^t > 2P$

(where P $\rightarrow$ Principal and t $\rightarrow$ required no. of years)

or $\left(1+\frac{1}{5}\right)^t > 2$ or $\left(\frac{6}{5}\right)^t > 2$

Now,

$\left(\frac{6}{5}\right)^t < 2, \left(\frac{6}{5}\right)^2 < 2, \left(\frac{6}{5}\right)^3 < 2$ but $\left(\frac{6}{5}\right)^4 > 2$

$\Rightarrow$ Required least no. of complete years = 4 years

39. (B) Let x hour = time taken by pipe A alone to empty the pool
$2x$ hours = time taken by pipe B alone to empty the pool
So, Time taken by pipes A and B together to empty the pool

$= \frac{x \times 2x}{x + 2x}$ hours

$= \frac{2x^2}{3x}$ hours $= \frac{2}{3}x$ hours

$\Rightarrow$ Time taken by pipe C alone to empty the pool $= \left(\frac{2}{3}x \times 2\right)$ hours $= \frac{4}{3}x$ hours

$\Rightarrow$ Part of the pool which will be empty when A, B and C work together,

$= \left(\frac{1}{x} + \frac{1}{2x} + \frac{3}{4x}\right)$ part

$= \left(\frac{4+2+3}{4x}\right)$ part $= \frac{9}{4x}$ part

$\Rightarrow$ Total time taken by A, B and C working together to empty the pool

$= \frac{4x}{9} = 400$ minutes

[$\therefore$ 6 hours 40 minutes = 400 minutes]

$\Rightarrow x = \frac{400 \times 9}{4}$ minutes

= 900 minutes = 15 hours

40. (C) –24, –20, –16..........
Let n = required no. of terms
Now,

$S_n = \frac{n}{2}\{2a + (n-1)d\}$

i.e. $180 = \frac{n}{2}\{2 \times (-24) + (n-1)4\}$

or, $180 = \frac{n}{2}\{-48 + 4n - 4\}$

or, $360 = 4n^2 - 52n$

or, $4n^2 - 52n - 360 = 0$

$\Rightarrow n = 18$

41. (D) $a^2d^2 + b^2c^2 - 2abcd + a^2c^2 + b^2d^2 + 2abcd$

$= a^2(c^2 + d^2) + b^2(c^2 + d^2)$

$= (a^2 + b^2)(c^2 + d^2)$

$= 2 \times 1 = 2$

42. (A) $\frac{(K-1)}{(2-K)} = \frac{1}{-3} = \frac{-2}{1}$

or, –3 (K – 1) = 2 – K

or, –3K + 3 = 2 – K

or, –3K + K = 2 – 3

$\Rightarrow -2k = -1$

$\Rightarrow K = \frac{1}{2}$

43. (D) $(x^2 + 5x + 10)^{-1} = \frac{1}{(x^2 + 5x + 10)}$

$\frac{1}{(x^2 + 5x + 10)}$ will be maximum when $x^2 + 5x + 10$ is minimum and maximum value of $x^2 + 5x + 10 = -\left(\frac{5^2 - 4 \times 1 \times 10}{4}\right)$

$= \frac{15}{4}$

So, Required maximum value $= \frac{1}{\frac{15}{4}} = \frac{4}{15}$

44. (D) $P = \sqrt{\frac{1 - \sin x}{1 + \sin x}} \Rightarrow P = \frac{1 - \sin x}{\cos x}$

and $Q = \frac{1 - \sin x}{\cos x}$

$R = \frac{\cos x}{1 + \sin x} \times \frac{1 - \sin x}{1 - \sin x}$

$= \frac{\cos x(1 - \sin x)}{\cos^2 x}$

$\Rightarrow R = 1 - \sin x$

P = Q = R

45. (D) $\sin\theta + \sin^2\theta + \sin^3\theta = 1$

$\Rightarrow \sin\theta + \sin^3\theta = \cos^2\theta$

$\Rightarrow \sin\theta(1 + \sin^2\theta) = \cos^2\theta$

$\Rightarrow \sin\theta(2 - \cos^2\theta) = \cos^2\theta$

$\Rightarrow \sqrt{1 - \cos^2\theta}(2 - \cos^2\theta) = \cos^2\theta$

$\Rightarrow (1 - \cos^2\theta)[4 + \cos^4\theta - 4\cos^2\theta] = \cos^4\theta$

$\Rightarrow 4 + \cos^4\theta - 4\cos^2\theta - 4\cos^2\theta - \cos^6\theta + 4\cos^4\theta = \cos^4\theta$

$\Rightarrow -\cos^6\theta + 4\cos^4\theta - 8\cos^2\theta + 4 = 0$

$\Rightarrow + \cos^6\theta - 4\cos^4\theta + 8\cos^2\theta = 4$

46. (B) $\sec^2\theta - (1 + \sqrt{3})\tan\theta + \sqrt{3} - 1 = 0$

$\Rightarrow 1 + \tan^2\theta - \tan\theta - \sqrt{3}\tan\theta + \sqrt{3} - 1 = 0$

$\Rightarrow \tan^2\theta - \sqrt{3}\tan\theta - \tan\theta + \sqrt{3} = 0$

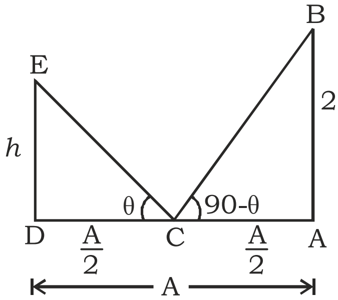
$\Rightarrow \tan\theta(\tan\theta - \sqrt{3}) - 1(\tan\theta - \sqrt{3}) = 0$

$\Rightarrow (\tan\theta - \sqrt{3})(\tan\theta - 1) = 0$

$\Rightarrow \tan\theta - \sqrt{3} = 0$

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

47. (D)



In ΔECD

$\tan\theta = \frac{h}{\frac{A}{2}} = \frac{2h}{A}$ ....(i)

In ΔACB

$\tan(90-\theta) = \frac{2h}{A} \times 2$

$\cos\theta = \frac{4-h}{A}$

$\tan\theta = \frac{A}{4h}$ ....(ii)

From equ^n (i) and (ii)

$\frac{2h}{A} = \frac{A}{4h^2}$

$8h^2 = A^2$

$h^2 = \frac{A^2}{8} = h = \frac{A}{2\sqrt{2}}$

48. (D) $2\sin\left(\frac{\pi x}{2}\right) = x^2 + \frac{1}{x^2}$

$\Rightarrow 2\sin\left(\frac{\pi x}{2}\right) = \left(x^2 + \frac{1}{x^2}\right)^2 + 2$

$[\therefore a^2 + b^2 = (a - b) + 2ab]$

$\Rightarrow \left(x - \frac{1}{x}\right)^2 = 2\left\{\sin\left(\frac{\pi x}{2}\right) - 1\right\}$

$\Rightarrow \left(x - \frac{1}{x}\right) = \sqrt{2\times 0}$ $\left[\sin\frac{\pi}{2} = 1\right]$

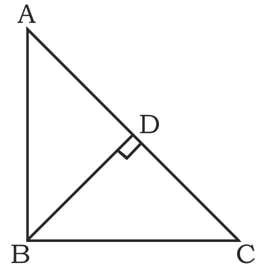
$= 0$ Also, $\left[1 = \sin\frac{\pi x}{2}\right]$

49. (D) $\frac{\text{Per}(\Delta ABC)}{\text{Per}(\Delta DEF)} = \frac{AB}{DE}$

$\frac{\text{Per}(\Delta ABC)}{25} = \frac{9.1}{6.5}$

Per (ΔABC) = 35

50. (B)



ΔADB ≅ ΔABC

$\Rightarrow \frac{AD}{AB} = \frac{AB}{AC}$

$\Rightarrow AB^2 = AD \times AC$

51. (D) Sum of all interior angles = 2 × sum of all exterior angles

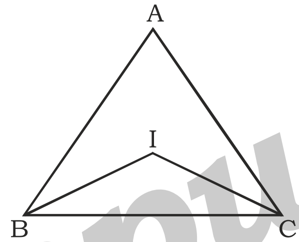
$\Rightarrow (n - 2) \times 180° = 2 \times 360°$

$\Rightarrow (n - 2) \times 180° = 720°$

$\Rightarrow (n - 2) = 4 \Rightarrow n = 6$

⇒ Required no. of sides of the polygon = 6

52. (B)



∠ABC = 65°

$\Rightarrow \angle IBC = \frac{\angle ABC}{2} = 32.5°$

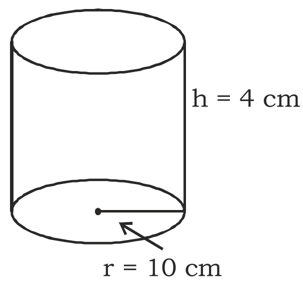
Also, ∠ACB = 55°

$\Rightarrow \angle ICB = \frac{\angle ACB}{2} = 27.5°$

⇒ ∠BIC = 180° – (∠IBC + ∠ICB)

= 180° – 60° = 120°

53. (A)



Let radius is increased by x cm

New volume of cylinder = $\pi(10 + x)^2 \times 4$

Again,

Let the height is increased by x cm

New volume of cylinder = $\pi \times 10^2 \times (4 + x)$

$\Rightarrow \pi(10 + x)^2 \times 4 = \pi \times 10^2 \times (4 + x)$

$\Rightarrow (10 + x)^2 \times 4 = 100\ (4 + x)$

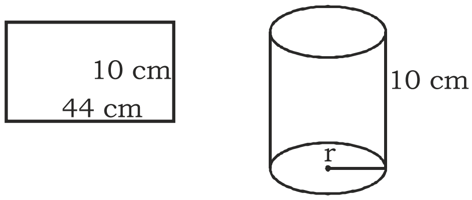
$\Rightarrow (10 + x)^2 = 25\ (4 + x)$

$\Rightarrow 100 + x^2 + 20x = 100 + 25x$

$\Rightarrow x^2 - 5x = 0 \Rightarrow x\ (x - 5) = 0$

$\Rightarrow x = 5$ cm

54. (B)



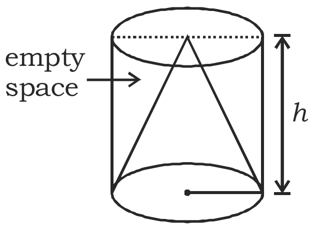
Volume of the cylinder = $\pi r^2 h$ $\Rightarrow 2\pi r = 44$ cm

$= \pi \times 7^2 \times 10$ $\Rightarrow r = \frac{44 \times 7}{22 \times 2}$ cm

$= \frac{22}{7} \times 49 \times 10$ $\Rightarrow r = 7$ cm

= 1540 m^3.

55. (C)



Volume of water needed to fill the empty space

= Volume of cylinder – Volume of cone

$= \pi r^2 h - \frac{1}{3}\pi r^2 h = \frac{2}{3}\pi r^2 h$

$= 2 \times \left(\frac{1}{3}\pi r^2 h\right)$

= $2 \times 27 \pi$ cm^3

= 54π cm^3

56. (C) T.S.A of prism = C.S.A + 2 × Area of base

$\Rightarrow$ 608 = Perimeter of base × height + 2× Area of base

$\Rightarrow 608 = 4x \times 15 + 2 \times x^2$

(where x = side of square)

$\Rightarrow x^3 + 30x - 304 = 0$

$\Rightarrow (x - 8)(x + 38) = 0$

$\Rightarrow x = 8$

$\Rightarrow$ Volume of prism = Area of base × height

= 8 × 8 × 15 = 960 cm^3

57. (B) Volume of water due to 2 cm rain on a square km land

= 1 km × 1km × 2 cm

= 1000m × 1000m × $\frac{2}{100}$ m

= 20000m^3

$\Rightarrow$ 50% of volume of rain drops

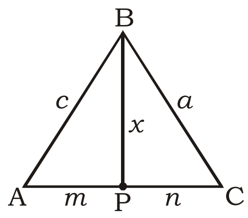
= 10000m^3

Now,

Required level by which the water level in the pool will be increased

$= \frac{10000m^3}{100m \times 10m} = 10$ m

58. (A)



A.T.Q,

AB + BC = 22 cm

AC = 12 cm

Let BC = a

AB = c

AP = m and PC = n

In ΔABP,

$c - m < x < c + m$ ....(i)

$a - n < x < a + n$ ....(ii)

In ΔBPC

Adding equation (i) and (ii)

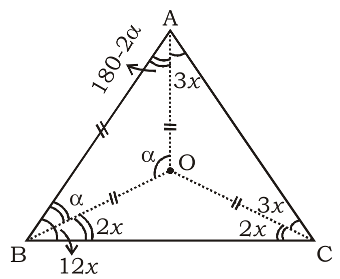
$(c + a) - (m + n) < 2x < (c + a) + (m + n)$

$22 - 12 < 2x < 22 + 12$

$5 < x < 17$

Smallest integer value = 6 cm

59. (B) ATQ,



In ΔABC

$12x + 180 - 2\alpha + 3x + 5x = 180$

$\Rightarrow 20x = 2\alpha$

$\Rightarrow 10x = \alpha$

In ΔOBC, $\angle B = 2x$

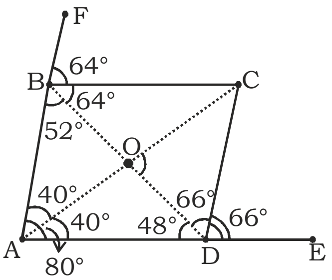
So, ΔABO

becomes an equilateral triangle

$10x = 60°$

$x = 6°$

60. (D)



AD is extended through a point E and AB is extended to a point F

So, ∠ABF = 64° and ∠ADE = 66°

Point C is exterior angle bisector and line AC is angle bisector of ∠A

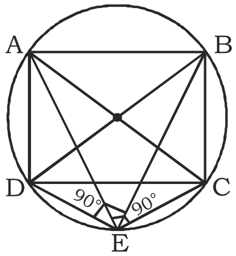
In ΔACD

∠C = 180° – 40° – 114° = 26°

Now, In ΔCOD

= 180° – 66° – 26° = 88°

61. (A)



⇒ $AE^2 + BE^2 + CE^2 + DE^2$

In ΔAEC and ΔDEB,

$AC^2 = AE^2 + EC^2$ ....(i)

$BD^2 = BE^2 + DE^2$ ....(ii)

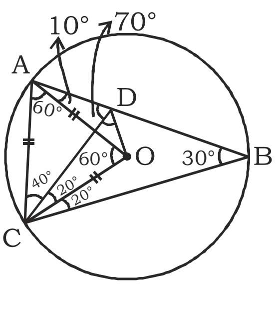
Adding equation (i) and (ii)

$AC^2 + BD^2 = AE^2 + EC^2 + BE^2 + DE^2$

$\Rightarrow (8\sqrt{2})^2 + (8\sqrt{2})^2 = AE^2 + EC^2 + BE^2 + DE^2$

= 256 cm

62. (A)



In ΔAOC

∠O = 60°, ∠O = 60° and ∠C = 60°

(∵ OA = OC = radius)

In ΔCDB

∠ADC = ∠DCB + ∠DBC = 70°

In ΔADC

∠A = 180° – (40° + 70°) = 70°

Now, in ΔADO

∠A = 10°

In ΔADC

∵ ∠A = 70° and ∠D = 70°

∴ AC = DC

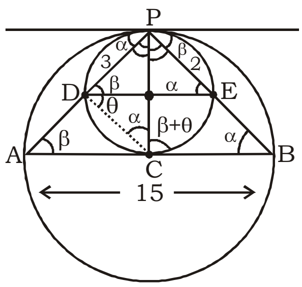
∵ OC = AC

∴ AC = DC = OC

So, ΔDOC become a Isosceles Triangle ∠DCO = 20°

Now, ∠D = ∠O = 80°

63. (D)



Draw a tangent at point P

Using alternate theorem for smaller circle

If ∠P = α then ∠E = α for another side of point P, ∠P = β, then ∠D = β

Similarly for larger circle

If ∠P = α then ∠B = α, for another side of point P ∠P = β then ∠A = β

ΔPDE and ΔPAB become similar triangles

$$\Rightarrow \frac{PD}{PA} = \frac{DE}{AB} = \frac{PE}{PB} \quad ....(i)$$

Draw a line between points P and C and between points D and C,

Using same arc property

∠PED = ∠PCD

By alternate segment

∠PDC = ∠PCB

Now, ∠DPC = ∠CPB

Hence, PC becomes an angle bisector ∠A

$$\frac{AC}{BC} = \frac{PA}{PB}$$

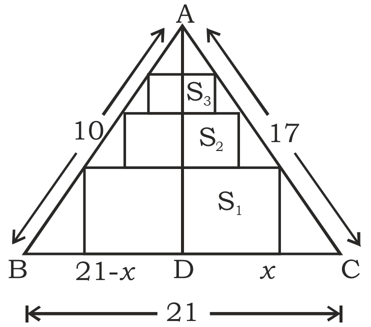
From equation (i)

$$\Rightarrow \frac{AC}{BC} = \frac{PD}{PE} = \frac{x}{15 - x} = \frac{3}{2}$$

⇒ $2x = 45 - 3x$

⇒ AC = x = 9 cm

64. (C)



$S_n = \dfrac{b \times h^n}{(b+h)^n}$

Let AD = h

$h^2 = 100 - (21 - x)^2$ ....(i)

$h^2 = 17^2 - x^2$ ....(ii)

From equation (i) and (ii)

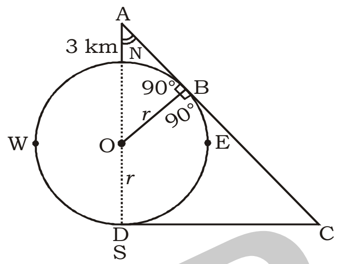
$\Rightarrow 100 - 441 - x^2 + 42x = 289 - x^2$

$\Rightarrow x = 15$ cm

$\Rightarrow$ h = 8 cm

$S_3 = \dfrac{21 \times 8^3}{(21+8)^3} = \dfrac{21 \times 8^3}{29^3}$

65. (A)



Let, radius r

In ΔABO

$(3 + r)^2 - r^2 = AB^2$

$\Rightarrow AB = \sqrt{(3+r)^2 - r^2}$

ΔABO and ΔADC are similar triangles

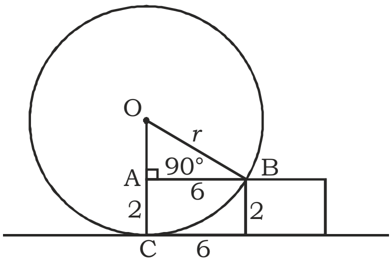
$\Rightarrow \dfrac{r}{9} = \dfrac{\sqrt{(3+r)^2 - r^2}}{3+2r}$

By options

Put $r = \dfrac{9}{2}$

Diameter = 9 cm

66. (A) ATQ,



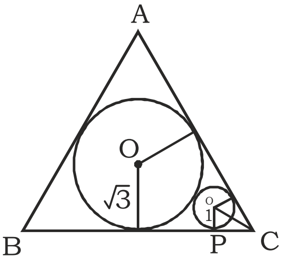
Let OC = r, AO = r – 2 and OB = r

$r^2 = (r - 2)^2 + 36$

$\Rightarrow r^2 = r^2 + 4 - 4r + 36$

$\Rightarrow$ r = 10 cm

67. (C)



$\Rightarrow r = \dfrac{6}{2\sqrt{3}} = \sqrt{3}$

Radius of O_1 circle

$r = \dfrac{\sqrt{3}}{3} = \dfrac{1}{\sqrt{3}}$

O_1C is a angle bisector of $\angle C$

Area of ΔO_1PC

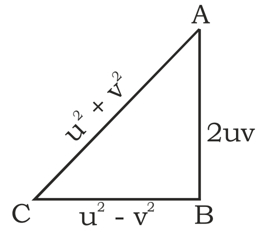
$= \dfrac{1}{2} \times \dfrac{1}{\sqrt{3}} \times 1 \times 2 = \dfrac{1}{\sqrt{3}}$

Area of shaded region

$= \dfrac{1}{\sqrt{3}} - \dfrac{\pi r^2}{360} \times 120°$

$= \dfrac{1}{\sqrt{3}} - \dfrac{\pi}{9}$

68. (B)



$AB = \sqrt{(u^2 + v^2)^2 - (u^2 - v^2)^2} = 2uv$

$\Rightarrow \dfrac{1}{2} 2uv \times (u^2 - v^2) = 2016$

$\Rightarrow$ uv (u – v) (u + v) = 2016

16 × 126

32 × 63

u × v (u – v)(u + v) = 16 × 2 × 9 × 7

u = 9, v = 7

AB = 2 × 9 × 7 = 126

$BC = u^2 - v^2 = 81 - 49 = 32$

$AC = u^2 + v^2 = 81 + 49 = 130$

Perimeter of ΔABC = 130 + 32 + 126

= 288 units

69. (B) A.T.Q,
Area of 4 – walls
= 2h (l + b)
= 2 × 2.5 (6 + 4) × 5
Two rooms have one square window each,
Now remaining area
⇒ 250 – 2.5 × 2.5 × 2 = 237.5

Number of cans required = $\frac{237.5}{20}$
= 11.87 = 12

70. (B) A.T.Q,
Let three term of A.P is are
18K – d, 18K, 18K + d
End of one year → 45K × 1.1 = 49.5K
Amount repaid → – 18K - d
31.5K + d
End of two years → (31.5K + d) × 1.1
(34.65K + 1.1d)
Amount repaid → – 18K
16.65K +1.1d
End of three years → (16.65K + 1.1d)×1.1
(16.65K + 1.1d)×1.1 = 18K + d
⇒ 18.315K + 1.21d = 18K + d
⇒ 0.315K = – 0.21d
Put K = 1000
315 = – 0.21d
d = – 1500

18K–d	18K	18K+d
18000 + 1500	18000	18000 –1500
₹ 19,500	₹ 18,000	₹ 16,500

71. (A) ATQ, 3 years interval
$\frac{5000}{4000} = \frac{5}{4}$

9 years ⟶ ₹ 5000

12 years ⟶ ₹ 5000× $\frac{5}{4}$

15 years ⟶ ₹ 5000 × $\frac{5}{4} \times \frac{5}{4}$ = ₹ 7812.5

Amount = ₹ 7812.5
For principal

6 years ⟶ ₹ 4000

3 years ⟶ ₹ 4000 × $\frac{4}{5}$

0 year ⟶ ₹ 4000 × $\frac{4}{5} \times \frac{4}{5}$ = ₹ 2560

Principal = ₹ 2560
Amount = ₹ 7812.5

72. (B) ATQ, sinθ + sinϕ = a, cosθ + cosϕ = b
putting the value θ = 90°and ϕ = 30°

$a = 1 + \frac{1}{2} = \frac{3}{2},\ b = \frac{\sqrt{3}}{2}$

$\tan\left(\frac{\theta - \phi}{2}\right) = \tan 30° = \frac{1}{\sqrt{3}}$

By options,

(B) ⇒ $\frac{\sqrt{4 - a^2 - b^2}}{a^2 + b^2} = \sqrt{\frac{4 - \frac{9}{4} - \frac{3}{4}}{\frac{9}{4} + \frac{3}{4}}} = \frac{1}{\sqrt{3}}$

73. (B) ATQ, $\frac{\sec 8A - 1}{\sec 4A - 1} = \frac{1 - \cos 8A}{1 - \cos 4A} \times \frac{\cos 4A}{\cos 8A}$

$= \frac{2\sin^2 4A}{2\sin^2 2A} \times \frac{\cos 4A}{\cos 8A}$

$= \frac{2\sin 4A.\cos 4A.\sin 4A}{2\sin^2 2A.\cos 8A}$

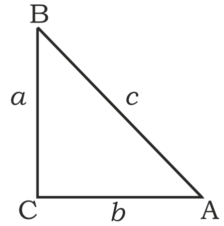
$= \frac{\sin 8A \times 2\sin 2A\cos 2A}{\cos 8A \times 2\sin^2 2A}$

$= \tan 8A.\frac{\cos 2A}{\sin 2A} = \frac{\tan 8A}{\tan 2A}$

74. (D) A.T.Q,
Let the roots of equation α and β

α + β = tanA + tanB = $\frac{a}{b} + \frac{b}{a} = \frac{a^2 + b^2}{ab}$

α β = tanA. tanB = $\frac{a}{b}.\frac{b}{a} = 1$



Then equation,

$x^2 - (\alpha + \beta)x + \alpha\beta = 0$

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

$abx^2 - (a^2 + b^2)x + ab = 0$

$abx^2 - c^2x + ab = 0 \quad (\because a^2 + b^2 = c^2)$

75. (A) $\tan 5x - \dfrac{\tan 3x - \tan 2x}{1 - \tan 3x \tan 2x}$

$= \tan 5x - \tan 5x \ \tan 3x \ \tan 2x - \tan 3x + \tan 2x$

$= \tan 5x \tan 3x \tan 2x = \tan 5x - \tan 3x - \tan 2x$

76. (A) $\dfrac{3 - \tan^2 A}{1 - 3\tan^2 A} = k \Rightarrow \tan^2 A = \dfrac{k-3}{3k-1}$

= cosecA (3sinA – 4$\sin^3$A) = (3 – 4 $\sin^2$A)

$\Rightarrow 3 - \dfrac{4}{\text{cosec}^2 A} = 3 - \dfrac{4}{1 + \cot^2 A}$

$\Rightarrow 3 - \dfrac{4}{1 + \dfrac{3k-1}{k-3}} = \dfrac{2k}{k-1}$

$\Rightarrow \sin^2 A = \dfrac{1}{\text{cosec}^2 A} = \dfrac{1}{1 + \cot^2 A} = \dfrac{k-3}{4(k-1)}$

$0 \le \sin^2 A \le 1$

$0 \le \dfrac{k-3}{4(k-1)} \le 1 \Rightarrow k \ge \dfrac{1}{3}$ or $k \ge 3$

77. (D) $m + n = a(\cos\alpha + \sin\alpha)(\cos^2\alpha - \cos\alpha\sin\alpha + \sin^2\alpha)$

$+3\cos\alpha\sin\alpha(2\cos\alpha + \sin\alpha)$

$= a(\cos\alpha + \sin\alpha)(1 + 2\cos\alpha\sin\alpha)$

$= a(\cos\alpha + \sin\alpha)^3$

$m - n = a(\cos\alpha - \sin\alpha)(\cos\alpha + \cos\alpha\sin\alpha + \sin^2\alpha)$

$-3\cos\alpha\sin\alpha(\cos\alpha - \sin\alpha)$

$= a(\cos\alpha - \sin\alpha)(1 - 2\sin\alpha\cos\alpha)$

$= a(\cos\alpha - \sin\alpha)^3$

$= (m+n)^{2/3} + (m-n)^{2/3}$

$= a^{2/3}(1 + 2\sin\alpha\cos\alpha) + a^{2/3}(1 - 2\sin\alpha\cos\alpha)$

$= 2a^{2/3}$

78. (D) cos(θ – α), cosθ, cos(θ + α) in h.p.
Then,

$\Rightarrow \cos\theta = \dfrac{2\cos(\theta-\alpha).\cos(\theta+\alpha)}{\cos(\theta-\alpha) + \cos(\theta+\alpha)}$

$\Rightarrow \cos\theta = \dfrac{\cos 2\theta + \cos 2\alpha}{2\cos\theta.\cos\alpha}$

$\Rightarrow 2\cos^2\theta.\cos\alpha = 2\cos^2\theta - 1 + \cos 2\alpha$

$\Rightarrow 2\cos^2\theta(\cos\alpha - 1) = -1 + 1 - 2\sin^2\alpha$

$\Rightarrow 2\cos^2\theta\left[1 - 2\sin^2\dfrac{\alpha}{2} - 1\right] = -2\sin^2\alpha$

$\Rightarrow 2\cos^2\theta\left(-2\sin^2\dfrac{\alpha}{2}\right) = -2.4\sin^2\dfrac{\alpha}{2}.\cos^2\dfrac{\alpha}{2}$

$\Rightarrow \cos^2\theta = 2\cos^2\dfrac{\alpha}{2}$

$\Rightarrow \cos^2\theta.\sec^2\dfrac{\alpha}{2} = 2$

$\Rightarrow \cos\theta \ . \ \sec\dfrac{\alpha}{2} = \pm\sqrt{2}$

79. (D) sinA + sinB = x

$\sin^2 A + \cos^2 A + 2\sin A.\cos A = x^2$

$2\sin A.\cos A = x^2 - 1$

we know that,

$\sin^6 A + \cos^6 A = 1 - 3\sin^2 A.\cos^2 A$

$\dfrac{1}{4}\left(4 - 3\left(x^2-1\right)^2\right) = 1 - \left(\dfrac{x^2-1}{2}\right)^2$

$1 - \dfrac{3}{4}\left(x^2-1\right)^2 = 1 - \dfrac{3}{4}\left(x^2-1\right)^2$

L.H.S = R.H.S

Hence, for all values of x are true

But sinA + cosA = x

So, $-\sqrt{2} \le x \le \sqrt{2} \Rightarrow x^2 \le 2$

80. (A)

	Person I	Person II
MRP ⟶	₹ 28000	₹ 20000 + ₹ 8000
Discount	₹ 2800	₹ 2400 + ₹ 640
		₹ 3040

Difference between selling price
= ₹ 3040 – ₹ 2800 = ₹ 240

81. (D) A.T.Q,

	A	:	B	:	C
SP	8	:	9	:	5
Profit%	8	:	7	:	14

8 units ⟶ 14.28%
↓
$\dfrac{1}{7}$ CP = 7 units, SP = 8 units

7 units ⟶ 12.50%
↓
$\dfrac{1}{8}$ SP = 9 units, CP = 8 units

14 units ⟶ 25%
↓
$\dfrac{1}{4}$ CP = 4 units, SP = 5 units

A : B : C
CP – 7 : 8 : 4
Total CP = 19 units
Total SP = 22 units

Profit % = $\dfrac{3}{19} \times 100 = 15\dfrac{15}{19}\%$

82. (C) Alcohol Water

Alcohol	Water	
5	9	×1
2	5	×2

Now, New ratio is-

Alchol	Water
5	9
4	10

(difference 1)

Here, mixture to be taken out = $\frac{1}{5}$

Now, $\frac{1}{5}$ unit = 5 litres

Then, total quantity = 1 unit

= 5 × 5 = 25 litres

83. (C) A.T.Q,

1M = 2C

and,

(4M + 5W + 6C) × 15 = (2M + 3W + 2C) × 31

⇒ (7M + 5W) × 15 = (3M + 3W) × 31

On solving, we get

4M = 6W

Then, the ratio of capacity of man, woman and child = 6 : 4 : 3

Let 1 man, 1 woman and 1 child can complete the work in x days.

Then,

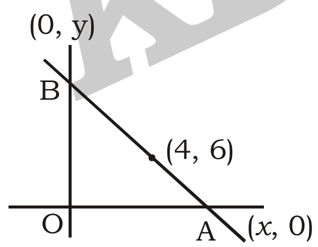
(6 × 4 + 4 × 5 + 6 × 3) × 15 = (6 + 4 + 3)× x

⇒ 62 × 15 = 13x

$\Rightarrow x = \frac{930}{13} = 71\frac{7}{13}$ days

∴ Required number of days = $71\frac{7}{13}$ days

84. (B) Let the coordinates of A and B be (x, 0) and (0, y) respectively.



Now, using mid point formula, we get,

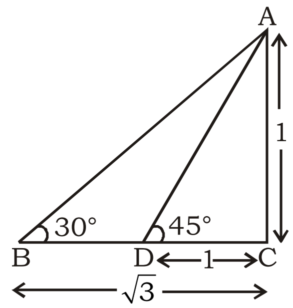
$\frac{x+0}{2} = 4 \Rightarrow x = 8$

and, $\frac{y+0}{2} = 6 \Rightarrow y = 12$

Then, area of ΔOAB = $\frac{1}{2} \times x \times y$

= $\frac{1}{2}$ × 8 × 12 = 48 sq. units

85. (A) A.T.Q,



BD = 20 m

Now,

$(\sqrt{3}-1)$ units = 20 m

Then, height of the lamp post

1 unit = $\frac{20}{\sqrt{3}-1}$ m = $10(\sqrt{3}+1)$ m

∴ Height of the lamp post = $10(\sqrt{3}+1)$ m

86. (C) Total age of couple at the time of marriage = 23 × 2 = 46 years

and, total age of family at the time birth of first child = 16 × 3 = 48 years

and, total age of family at the time of birth of second child = 15 × 4 = 60 years

Here, age of the first child = $\frac{60-48}{3}$

= 4 years

Now,

total age of family = 20 × 4 = 80 years

then, age of the first child = 4 + $\frac{80-60}{4}$

= 4 + 5 = 9 years

87. (A) A.T.Q,

	upstream	downstream
Time	3	1
Speed	1	3

Then,

Speed of man in still water = $\frac{1+3}{2}$ = 2 units

and, speed of current = $\frac{3-1}{2}$ = 1 unit

Now, speed of man (2 units) = $\frac{23}{3}$ kmph

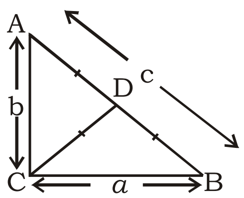
Then, speed of current (1 unit)

= $\frac{23}{3} \times \frac{1}{2} = \frac{23}{6} = 3\frac{5}{6}$ kmph

88. (B) Let length, breadth and height of the cuboid be $4x$, $2x$ and x respectively.
Then, volume of the cuboid
$= 4x \times 2x \times x = 8x^3$
After changes, the dimensions of the cuboid becomes $2x$, $4x$ and $\frac{x}{2}$ respectively.
Then,
Volume of the cuboid $= 2x \times 4x \times \frac{x}{2} = 4x^3$
$\therefore$ Required percentage change
$= \frac{8x^3 - 4x^3}{8x^3} \times 100\% = 50\%$

89. (D) A.T.Q,
$x^2 - \sqrt{3}\,x - 1 = 0$
$\Rightarrow x - \frac{1}{x} = \sqrt{3}$ .... (i)
We know that,
$\left(x + \frac{1}{x}\right)^2 - \left(x - \frac{1}{x}\right)^2 = 4$
Then,
$x + \frac{1}{x} = \sqrt{7}$ .... (i)
Multiply equation (i) and (ii), we get
$x^2 - \frac{1}{x^2} = \sqrt{21}$
Taking cube both sides, we get
$x^6 - \frac{1}{x^6} - 3\left(x^2 - \frac{1}{x^2}\right) = 21\sqrt{21}$
$\Rightarrow x^6 - \frac{1}{x^6} = 24\sqrt{21}$

90. (D) We know that,



Circumradius of a right angle triangle is equal to half of its hypotenuse.
Then,
c = 52 × 2 = 104 cm
Now,
perimeter of ABC = 112 × 2
$\Rightarrow$ a + b + c = 224 cm
$\Rightarrow$ a + b = 120 cm
and,
$(a + b)^2 = 120^2$
$\Rightarrow a^2 + b^2 + 2ab = 120^2$
$\Rightarrow 2ab = 120^2 - c^2$
$\Rightarrow 2ab = 120^2 - 104^2$
$\Rightarrow 2ab = 16 \times 224$
Then,
Area of ABC $= \frac{1}{2}ab$
$= \frac{16 \times 224}{4} = 896\ cm^2$

91. (B) Graduate male population of state
A $= \left(24 \times \frac{16}{100} \times \frac{7}{12}\right)$ lakh = 2.24 lakh
XII std male population of state A
$= \left(32 \times \frac{15}{100} \times \frac{7}{16}\right)$ lakh = 2.1 lakh
$\therefore$ Required difference = (2.24 – 2.1) lakh = 14000

92. (D) Graduate female population of state
E $= 24 \times \frac{20}{100} \times \frac{7}{16} = 2.1$ lakh
XII std femle population of state
D $= 32 \times \frac{12}{100} \times \frac{7}{12} = 2.24$ lakh
$\therefore$ Required ratio = 2.1 : 2.24
= 210 : 225 = 15 : 16

93. (C) Graduate female population of state
C $= 24 \times \frac{15}{100} \times \frac{4}{9} = 1.6$ lakh
XII std female population of state
C $= 32 \times \frac{18}{100} \times \frac{5}{9} = 3.2$ lakh
$\therefore$ Required percentage
$= \frac{1.6}{3.2} \times 100\% = 50\%$

94. (A) XII std pass male population of state
C $= 32 \times \frac{18}{100} \times \frac{4}{9} = 2.56$ lakh
$\therefore$ Required percentage
$= \frac{2.56}{32} \times 100\% = 8\%$

95. (D) Graduate male population of state

$$E = 24 \times \frac{20}{100} \times \frac{9}{16} = 2.7 \text{ lakh}$$

XII std pass female population of state

$$E = 32 \times \frac{19}{100} \times \frac{10}{19} = 3.2 \text{ lakh}$$

∴ Required ratio = 27 : 32

96. (C) Total numbers of obese men in 2007
66000 × 35% = 23100
Total number of obese women in 2007 = 54000 × 25% = 13500
Total numbers of obese children in 2007
16000 × 12.5% = 2000
Required average
= (23100 + 1350 + 2000) ÷ 3
= 38600 ÷ 3 = 12867

97. (B) Required percentage

$$= \frac{78000 \times 37.5\%}{78000 \times 62.5\%} \times 100 = 60\%$$

98. (D) Required ratio

$$= \frac{60000 \times 20\%}{70000 \times 27.5\%} \times 100 = 48 : 77$$

99. (A) No. of obese women in 2006
= 20% of 60000 = 12000
Numbers of obese children in 2006
= 25% of 12000 = 3000
Numbers of obese men in 2006 = 32.5% of 63000 = 20475
Required difference = 20475 – (12000 + 3000) = 20475 – 15000 = 5475

100. (D) Number of children not suffering from obesity in 2005 = 90% of 21000 = 18900
Number of children not in 2004 = 85% of = 15000
Total of these two equals to 31650.

SSC TIER II (MATHS) MOCK TEST - 50 (ANSWER KEY)

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

Note:- If your opinion differs regarding any answer, please message the mock test and question number to 8860330003

Note:- Whatsapp with Mock Test No. and Question No. at 7053606571 for any of the doubts. Join the group and you may also share your suggestions and experience of Sunday Mock

Note:- If you face any problem regarding result or marks scored, please contact 9313111777