TEST NO. 52 SSC Mains (Maths) Answer with Explanation

1. (D) $(a-1)\sqrt{2}+3 = b\sqrt{2}+a$

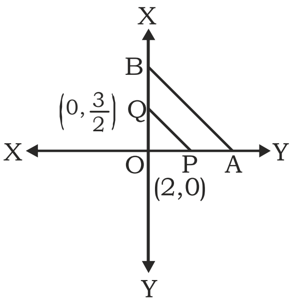
$\Rightarrow a = 3,\ a-1 = b$

$\Rightarrow 3-1 : b \Rightarrow b = 2$

$\therefore\ a+b = 3+2 = 5$

2. (B) OP = 2

$OQ = \dfrac{3}{2}$



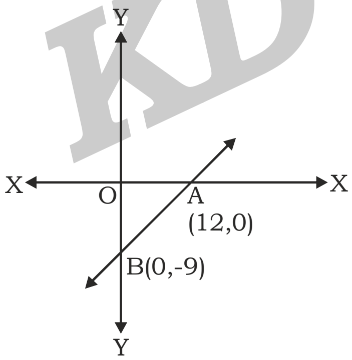
$\therefore\ PQ = \sqrt{OP^2+OQ^2}$

$= \sqrt{2^2+\left(\dfrac{3}{2}\right)^2}$

$= \sqrt{4+\dfrac{4}{9}}$

$= \sqrt{\dfrac{16+9}{4}} = \sqrt{\dfrac{25}{4}} = \dfrac{5}{2} = 2.5$ cm

3. (A) A.T.Q,



Putting $x = 0$ in $9x-12y = 108$,
we get, $y = -9$
Putting y = 0 in $9x-12y = 108$,
we get, $x = 12$
$\therefore$ OA = 12, OB = 9

$AB = \sqrt{OA^2+OB^2}$

$= \sqrt{12^2+9^2}$

$= \sqrt{144+81} = \sqrt{225} = 15$ units

4. (A) $\left(x+\dfrac{1}{x}\right)^2$

$\Rightarrow x+\dfrac{1}{x} = \sqrt{3}$

On cubing both sides,

$x^3+\dfrac{1}{x^3}+3\left(x+\dfrac{1}{x}\right) = 3\sqrt{3}$

$\Rightarrow x^3+\dfrac{1}{x^3} = 3\sqrt{3}-3\sqrt{3} = 0$

$\Rightarrow x^6+1 = 0$

$\therefore\ x^{206}+x^{200}+x^{90}+x^{84}+x^{18}+x^{12}+x^6+1$

$= x^{200}(x^6+1)+x^{84}(x^6+1)+x^{12}(x^6+1)+(x^6+1) = 0$

5. (A) $\dfrac{\sqrt{7}}{\sqrt{16+6\sqrt{7}}-\sqrt{16-6\sqrt{7}}}$

$= \dfrac{\sqrt{7}}{\sqrt{9+7+2\times3\times\sqrt{7}}-\sqrt{9+7-2\times3\times\sqrt{7}}}$

$= \dfrac{\sqrt{7}}{\sqrt{(3)^2+(\sqrt{7})^2+2\times3\times\sqrt{7}}-\sqrt{(3)^2+(\sqrt{7})^2-2\times3\times\sqrt{7}}}$

$= \dfrac{\sqrt{7}}{\sqrt{(3+\sqrt{7})^2}-\sqrt{(3-\sqrt{7})^2}}$

$= \dfrac{\sqrt{7}}{(3+\sqrt{7})-(3-\sqrt{7})} = \dfrac{\sqrt{7}}{2\sqrt{7}} = \dfrac{1}{2}$

6. (B) $a \otimes b = a+b$ when, a and b both positive

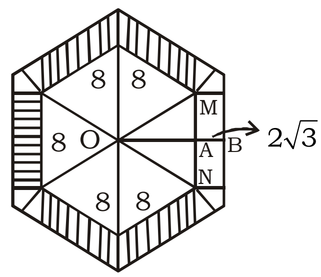
$a \otimes b = \sqrt{a^2+b^2}$ for any another value

Then expression,

$\dfrac{10-4}{\sqrt{9+16}} = \dfrac{6}{5}$

7. (A) A.T.Q,

Internal side = 8cm



$\therefore$ ΔOMN is an equilateral triangle

$AO = \frac{\sqrt{3}}{2} \times 8 = 4\sqrt{3}$

$OA = 4\sqrt{3}$

$OB = 6\sqrt{3}$

OB become height of the larger hexagon

$\frac{\sqrt{3}}{2}a = 6\sqrt{3}$

a =12

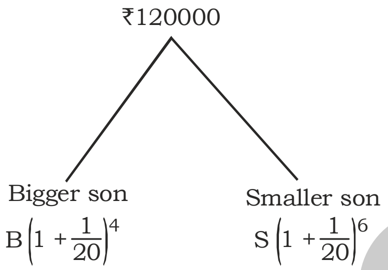
side = 12 cm

Area of shaded region

$= \frac{\sqrt{3}}{4}(12)^2 \times 6 - \frac{\sqrt{3}}{4} \times (8)^2 \times 6$

$= \frac{\sqrt{3}}{4} \times 6[144 - 64] = 120\sqrt{3}$

8. (B) A.T.Q,



Intial age of Bigger son = 14 years

Smaller son = 12 years

$= B\left(1+\frac{1}{20}\right)^4 = S\left(1+\frac{1}{20}\right)^6$

$\frac{B}{S} = \frac{441}{400}$

841 units $\rightarrow$ ₹120000

400 units $\rightarrow$ ₹57074.9

9. (C) ATQ,

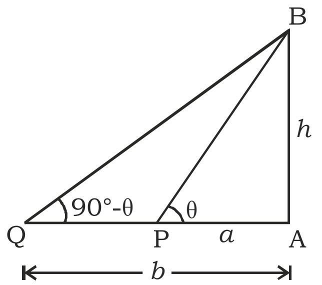
₹6000 $\xrightarrow[30\% = +1800]{}$ ₹7800
-2000

₹5800 $\xrightarrow[30\% = +1740]{}$ ₹7540
-2000

₹5540 $\xrightarrow[30\% = +1662]{}$ ₹7202

He has to pay ₹7202 at the end of third year to clear the loan

10. (A) A.T.Q,



Here, h = height of tower AB

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

$\tan(90° - \theta) = \frac{h}{b}$

or, $\cot\theta = \frac{h}{b}$

$\Rightarrow \tan\theta = \frac{b}{h}$ ....(i)

From equation (i) and (ii)

$\frac{h}{a} = \frac{b}{h} \Rightarrow h = \sqrt{ab}$

11. (A) Here,

$3^{50} = (3^5)^{10} = 243^{10}$,

$4^{40} = (4^4)^{10} = 256^{10}$,

$5^{30} = (5^3)^{10} = 125^{10}$,

and,

$6^{20} = (6^4)^{10} = 36^{10}$,

$\therefore$ Greatest number = $256^{10} = 4^{40}$

12. (C) A.T.Q,

1M = 2C

and,

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

$\Rightarrow$ (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,

$(6 \times 4 + 4 \times 5 + 6 \times 3) \times 15$

$= (6 + 4 + 3) \times x$

$\Rightarrow 62 \times 15 = 13x$

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

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

13. (B) Let the investments of the person be P_1, P_2 and P_3

A.T.Q,

$$P_1\left[\frac{r_1 t_1}{100}+1\right] = P_2\left[\frac{r_2\,t_2}{100}+1\right] = P_3\left[\frac{r_3\,t_3}{100}+1\right]$$

$$\Rightarrow\ P_1\left[\frac{6\times5}{100}+1\right]=P_2\left[\frac{8\times5}{100}+1\right]=P_3\left[\frac{10\times6}{100}+1\right]$$

$\Rightarrow 13P_1 = 14P_2 = 16P_3$

Then,

$P_1 : P_2 : P_3 = 14 \times 16 : 13 \times 16 : 13 \times 14$

$= 112 : 104 : 91$

$\therefore$ Required ratio = 112 : 104 : 91

14. (B) Let the total profit be $2x$.

Now the amount which B gets as allowance = 12 × 150 = ₹1800

Now,

The profit shared between A and B

$$= \frac{2x-1800}{2} = x-900$$

Now, the amount which B pays to A

$$= 50,000 \times \frac{10}{100} = ₹5000$$

A.T.Q,

$$\frac{x-900+5000}{x-900-5000+1800} = \frac{3}{2}$$

$$\Rightarrow \frac{x+4100}{x-4100} = \frac{3}{2}$$

$\Rightarrow 2x + 2 \times 4100 = 3x - 3 \times 4100$

$\Rightarrow x = 5 \times 4100$

$\Rightarrow x = 20500$

Then,

Total profit

$= 2x = 2 \times 20500 = ₹41000$

15. (A) Angles of triangle,

$\Rightarrow (a-d)°,\ a°,\ (a+d)°$

$\therefore a - d + a + a + d = 180°$

$\Rightarrow 3a = 180° \Rightarrow \quad a = 60$

$$\therefore \frac{a-d}{a+d} = \frac{60}{\pi} = \frac{60}{180} = \frac{1}{3}$$

$$\Rightarrow \frac{60-d}{60+d} = \frac{1}{3}$$

$\Rightarrow 180 - 3d = 60 + d$

$\Rightarrow 4d = 120° \Rightarrow \quad d = 30°$

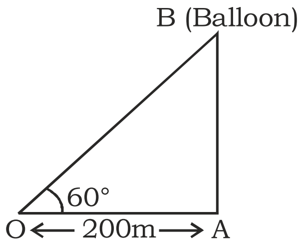
$a - d = 60° - 30° = 30°$

$a = 60°$

$a + d = 60° + 30° = 90°$

So, Angles of triangle are 30°, 60° and 90°

16. (A) In the given figure after leaving the point A, balloon reaches point B vertically upward in 1.5 min



Here, O $\rightarrow$ the observer

So, $\angle BOA = 60°$ (observer)

$$\Rightarrow \tan 60° = \frac{AB}{OA}$$

$\Rightarrow AB = OA \tan 60°$

$= 200 \times \sqrt{3}$

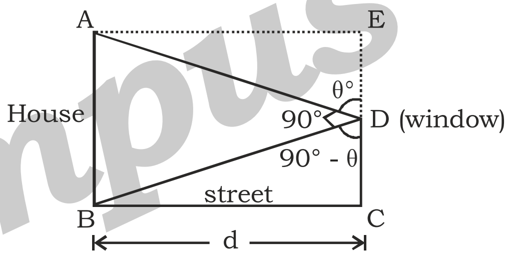
So, speed of the balloon

$$= \frac{\text{Distance}}{\text{Time}}$$

$$= \frac{AB}{\text{time to reach from A to B}}$$

$$= \frac{200\sqrt{3}m}{1.5\times60} = 3.87 \text{ m/sec}$$

17. (C) A.T.Q,



Here,

AB $\rightarrow$ height of the house

and CD $\rightarrow$ height of the window

So, $\angle ADB = 90°$

Also,

here line AD makes an angle θ° with the vertical line DE.

$\Rightarrow \angle ADE = \theta°$ also,

$\Rightarrow \angle BDC = 90° - \theta°$

In ΔBCD,

$$\tan(90° - \theta) = \frac{BC}{CD} = \frac{d}{CD} \text{ or, } \cot\theta = \frac{d}{CD}$$

$$\Rightarrow CD = \frac{d}{\cot\theta} = d\tan\theta$$

Also,

In ΔADE,

$$\tan\theta = \frac{AE}{DE} = \frac{d}{DE} \Rightarrow DE = \frac{d}{\tan\theta} = d\cot\theta$$

So, the height of the house,

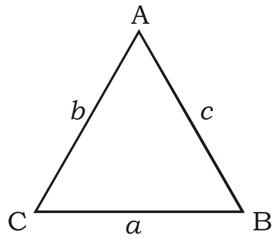
$AB = CD + DE$

$= d(\tan\theta + \cot\theta)$

$$= d\left(\frac{\sin\theta}{\cos\theta}+\frac{\cos\theta}{\sin\theta}\right) = d\left(\frac{1}{\cos\theta\times\sin\theta}\right)$$

$= d \sec\theta \operatorname{cosec}\theta$

18. (A) A.T.Q,



Let ABC is a Δ and a, b and c are the lengths of BC, CA and AB respectively.

$\because$ sinA : sinB : sinC = 1 : 1 : $\sqrt{2}$

By sine formula:

$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

$\Rightarrow a : b = \sin A : \sin B$ and $b : c = \sin B : \sin C$

$\Rightarrow a : b : c = 1 : 1 : \sqrt{2}$

Let $a = x$, $b = x$ and $c = \sqrt{2}\,x$

$c^2 : (a^2 + b^2) = (\sqrt{2}\,x)^2 : (x^2 + x^2)$

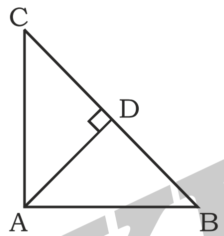
$= 2x^2 : 2x^2 = 1 : 1$

19. (B) In ΔACD and ΔABC,

$\angle CDA = \angle CAB = 90°$

$\because \angle C$ is common.

$\Delta ACD \sim \Delta ABC$



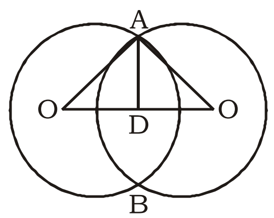
$\therefore \frac{\Delta ACD}{\Delta ABC} = \frac{AC^2}{BC^2}$

$\Rightarrow \frac{10}{40} = \frac{9^2}{BC^2}$

$\Rightarrow BC^2 = 4 \times 9^2$

$\therefore BC = 2 \times 9 = 18$ cm

20. (B) A.T.Q,



$OD = \sqrt{15^2 - 12^2}$

$= \sqrt{225 - 144}$

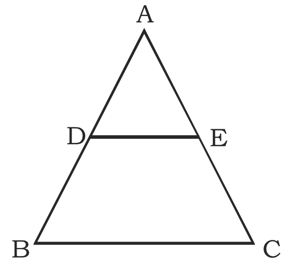
$= \sqrt{81} = 9$

$OD = \sqrt{13^2 - 12^2}$

$= \sqrt{169 - 144} = \sqrt{25} = 5$ cm

$\therefore OO' = 9 + 5 = 14$ cm

21. (B) ATQ,



DE // BC

$\angle ADE = \angle ABC$

$\angle AED = \angle ACB$

$\therefore \Delta ADE \sim \Delta ABC$

$\therefore \frac{\square BDEC}{\Delta ADE} = \frac{1}{1}$

$\Rightarrow \frac{\square BDEC}{\Delta ADE} + 1 = 1 + 1$

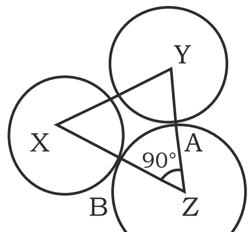
$\Rightarrow \frac{\Delta ABC}{\Delta ADE} = 2 = \frac{AB^2}{AD^2}$

$\Rightarrow \frac{AB}{AD} = \sqrt{2} \Rightarrow \frac{AB}{AD} - 1 = \sqrt{2} - 1$

$\Rightarrow \frac{AD}{BD} = \frac{1}{\sqrt{2} - 1}$

$AD : BD = 1 : \sqrt{2} - 1$

22. (B) A.T.Q,



$XZ = r + 9$ and $YZ = r + 2$

$\therefore XY^2 = XZ^2 + ZY^2$

$\Rightarrow 17^2 = (r + 9)^2 + (r + 2)^2$

$\Rightarrow 289 = r^2 + 18r + 81 + r^2 + 4r + 4$

$\Rightarrow 2r^2 + 22r + 85 - 289 = 0$

$\Rightarrow 2r^2 + 22r - 204 = 0$

$\Rightarrow r^2 + 11r - 102 = 0$

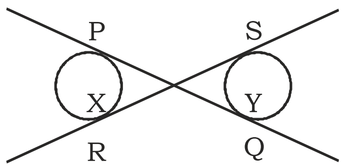
$\Rightarrow r^2 + 17r - 6r - 102 = 0$

$\Rightarrow r(r + 17) - 6(r + 17) = 0$

$\Rightarrow (r - 6)(r + 17) = 0$

$\Rightarrow r = 6$ cm

23. (A) A.T.Q,



Length of transverse tangent

$= \sqrt{XY^2 - (r_1 + r_2)}$

$\Rightarrow 8 = \sqrt{XY^2 - 9^2}$

$\Rightarrow 64 = XY^2 - 81$

$\Rightarrow XY^2 = 64 + 81 = 145$

$\Rightarrow XY = \sqrt{145}$

24. (C) $\because$ AB is diameter

$\Rightarrow \angle ADB = 90°$

also $DO \perp AB$ at 'O' the centre of the circle,

$\therefore \Delta ADO \cong \Delta BDO$ (by SAS cong. Rule)

$\Rightarrow AD = DB$ (by CPCT)

$\therefore \angle DAB = \angle ABD = 45°$

But $\angle ACD = \angle ABD$ (angles in the same segment of a circle)

$= 45°$

25. (A) $\angle CAD = \angle CBD$ (Angles in the same segment of a circle)

$= 60°$

Now $\angle BAD = \angle BAC + \angle CAD$

$= 30 + 60° = 90°$

Now $\angle BAD + \angle BCD = 180°$

($\therefore$ □ABCD is cyclic)

$\Rightarrow 90° + \angle BCD = 180°$

$\Rightarrow \angle BCD = 180° - 90° = 90°$

26. (A) Perimeter of the rope

$= 3 \times (\frac{1}{3}$ of circumference of a circle + $3\times$ diameter of a circle)

$= 3 \times \frac{1}{3} \times 2\pi + 3 \times 2$

$= 2\pi + 6$

27. (A) A.T.Q,

$\because DC || AB$ (given)

$\Rightarrow \Delta AOB \sim \Delta COD$ (by AA similarity)

$\Rightarrow \frac{ar(\Delta AOB)}{ar(\Delta COD)} = \frac{AB^2}{DC^2}$

$= \frac{(3DC)^2}{DC^2} = \frac{9DC^2}{DC^2} = \frac{9}{1} = 9 : 1$

28. (B) In the given figure, ΔABC is a right angle triangle, where $\angle B = 90°$

AE, BD and CF are the 3 medians

Now, AB = 12 cm, BC = 9 cm and AC = 15 cm

$BD = \frac{1}{2}AC \Rightarrow BD^2 = \frac{1}{4}AC^2$

$\Rightarrow AE^2 + CF^2 = \frac{5}{4}AC^2$

Also,

$\Rightarrow BD^2 + AE^2 + CF^2 = \left(\frac{1}{4} + \frac{5}{4}\right)AC^2$

$= \frac{6}{4}AC^2 = \frac{6}{4} \times 225 = 337.5$ cm

29. (A) A.T.Q,

	Red	Yellow	
Total	5	4	×10
Upper half	3	2	×9

New Ratio becomes

	Red	Yellow
Total	50	40
Upper half	27	18
lower half	23	22

Then,

Required ratio = 23 : 22

30. (A) d_m : diameter of the moon

d_e : diameter of the earth

Case – I

$\because d_m = \frac{1}{4}d_e$

Let r unit be the radius of the earth.

then, $d_m = \frac{1}{4}2r = \frac{r}{2}$ unit

R_m : radius of the moon $= \frac{r}{2 \times 2} = \frac{r}{4}$ unit

$\frac{V_e}{V_m} = \frac{\frac{4}{3}\pi r^3}{\frac{4}{3}\pi\left(\frac{r}{4}\right)^3} = 64 : 1$

31. (B) Perimeter $= 2(l + b)$

$P = 2(l + w)$

$\frac{P}{2} - w = l$

Its area $= l \times b$

$k = \left(\frac{P}{2} - w\right) \times w$ s

$\Rightarrow 2k = Pw - 2w^2$

$\Rightarrow 2w^2 - Pw + 2k = 0$

32. (C) Volume of the ice-cream in cylindrical container = $\pi r^2 h = \frac{22}{7} \times 6 \times 6 \times 15$ cm³

Let r cm be the radius of the cone its height =$4r$ cm

Volume of 1 cone with hemispherical top

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

$= \frac{1}{3}\pi r^2 \times 4r + \frac{2}{3}\pi r^3$

$= \frac{4}{3}\pi r^3 + \frac{2}{3}\pi r^3$

$= \frac{6}{3}\pi r^3 = 2\pi r^3$

Volume of 10 such cones = $10 \times 2\pi r^3$ cm³

A.T.Q,

$\frac{22}{7} \times 6 \times 6 \times 15 = 10 \times 2\pi r^3$

$\frac{22}{7} \times 6 \times 6 \times 15 = 10 \times 2 \times \frac{22}{7} \times r^3$

$\Rightarrow r^3 = \frac{6 \times 6 \times 15}{10 \times 5} = \frac{6 \times 6 \times 6}{2 \times 2 \times 2}$

$\Rightarrow r = \frac{6}{2}$ cm = 3 cm

33. (D) Time = 3 : 18 : 07 – 1 : 55 : 08
= 1 : 22 : 59

Total number of swith on

$= \frac{1 \times 3600 + 22 \times 60 + 59}{13}$

$\Rightarrow$ 383 + 1 = 384

34. (A) Area of rectangular field = $\frac{1000}{1} \times 4\text{m}^2$
= 4000 m²

$\because$ breadth = 50 m

$\therefore$ Length = $\frac{4000}{50}$ = 80 m

New length of field = (80 + 20)m = 100m

New area = 100 × 50 = 5000 sq.m

$\therefore$ Required expenditure = ₹$\left(5000 \times \frac{1}{4}\right)$
= ₹ 1250

35. (C) Increase in water level

$= \frac{\text{Volume of sphere}}{\text{Area of base of cylinder}}$

$= \frac{\frac{4}{3}\pi r^2}{\pi r^2} = \frac{4}{3}r = \frac{4}{3} \times 3.5 = \frac{14}{3}$ cm.

$\therefore$ Required water level

$= 7 - \frac{14}{3} = \frac{7}{3}$ cm.

36. (A) Curbed surface of cylinder = 2πrh

Case – II

Radius = $\frac{1}{3}$r : height = 6h

Curved surface = 2π × $\frac{1}{3}$r × 6h

= (2πrh) × 2

$\therefore$ Increase will be twice.

37. (A) Total cost price of 80 dozen Bananas at ₹ 10 per dozen
= ₹ 800

12 dozen got rotten and its selling price is,
= ₹ 12 × 6
= ₹ 72

Remaining dozens sell it 14 per dozen
= ₹ 14 × 68

Total selling price = 1024

Profit % = $\frac{1024 - 800}{800} \times 100$ = 28%

38. (A) A.T.Q,

$2[2016^2 - 2015^2 + 2014^2 - 2013^2 + \ldots\ldots + 2^2 - 1^2]$

= 2[(2016 + 2015) (2016 – 2015) + (2014 + 2013) (2014 – 2013) ...... (2 + 1)(2 – 1)

= 2[2016 + 2015 + 2014 + 2013 + ... + 1]

$= 2 \times \frac{2016 \times 2017}{2} = 2016 \times 2017$

Now, 2016 × 2017 = 2016^2 + 2016

$\therefore$ The number which must be subtracted to make it a perfect square = 2016

39. (C) S.I for 2 years = $\frac{16000 \times 15 \times 2}{100}$ = 4800

Principal for C.I = 16000+4800 = 20800

C.I Rate $\rightarrow$ 12% = $\frac{12}{100} = \frac{3}{25}$

Compound Interest for 1st year

= 20800 × $\frac{3}{25}$ = 2496

C.I for 2nd year = 20800 × $\frac{3}{25}$ + 2496×$\frac{3}{25}$

= 2496 + 299.52 = 2795.52

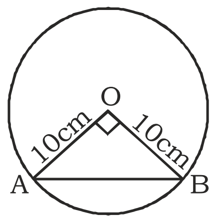
Total interest after 4 years = 4800 + 2496 + 2796.52 = 10091.52

40. (C) Let 1 kg tea = ₹1
20 kg tea = ₹20

$$\begin{array}{cc} +1 \text{ kg - free} & \\ \downarrow & \downarrow -10\% \\ 21 \text{ kg} & ₹18 \end{array}$$

Profit = $\frac{21-18}{18} \times 100$ = 16.66%

41. (A) A.T.Q,



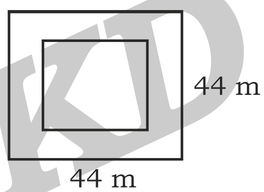
Area of the minor segment
= sector area OABO – area of ΔOAB

$= \frac{3.14 \times 10 \times 10 \times 90°}{360°} - \frac{1}{2} \times 10 \times 10$

$= \frac{314}{4} - 50$ = 78.5 – 50 = 28.5 cm^2

Area of the major segment
= area of circle – area of minor segment
= 3.14×10×10 – 28.5
= 314 – 28.5 = 205.5 cm^2

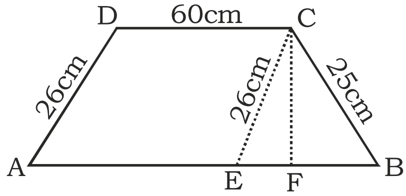
42. (C) A.T.Q,



Total area of the square field
= (44 × 44)m^2 = 1936m^3
At the rate of ₹ 1 per sq. metre, the total cost would be ₹ 1936,
but the total cost = ₹ 3536
Difference = ₹ 3536 – ₹ 1936 = ₹ 1600
⇒ ₹ 1600 would be the extra cost on the flower bed and as the extra cost on the flower bed is ₹ 1 per sq. metre
⇒ Area of flower bed = 1600 sq. metres
⇒ Side of flower bed = $\sqrt{1600}\ m^2 = 40m$

So, width of the gravel path = $\frac{44-40}{2}$
= 2 metres

43. (B) A.T.Q,



□ABCD is a trapezium
Draw CE ||DA intersecting AB at E.
⇒ □ABCE is a || gm.
⇒ DA = CE = 26 cm
In ΔBCE,

S = $\frac{17+25+26}{2} = \frac{68}{2}$ = 34

Area (ΔBCE),
$= \sqrt{34(34-17)(34-25)(34-26)}\ cm^2$
$= \sqrt{34 \times 17 \times 9 \times 8}$
$= \sqrt{2 \times 17 \times 17 \times 3 \times 3 \times 2 \times 2 \times 2}$
= 2 × 2 × 3 × 17 = 204 cm^2

⇒ $\frac{1}{2}$ × BE × height = 204

or, $\frac{1}{2}$×17×CM = 204

⇒ CM = $\frac{204 \times 2}{17}$ = 24 cm

Area (Trap. ABCD) = $\frac{1}{2}$×(60 + 77) × 24

= $\frac{1}{2}$×137×24 = 1644 sq. cm

44. (B) A.T.Q,

25% = $\frac{1}{4}$

Time A : B
4 : 5
Effi 5 : 4
Let, total work is W

A	A+B	B
$\frac{W}{2}$	4 days	$\frac{W}{20}$
5	9	4

$\frac{W}{10} + 4 + \frac{W}{80}$ = 13 days
⇒ W = 80 units
B alone does the work,
$\frac{80}{4}$ = 20 days

45. (C) A.T.Q,

Age $\geq 51 \rightarrow 30$

Age < 51 $\rightarrow$ 39 (at most)

(y) (x)

Overall average ages are $\rightarrow$ 38 years

Largest possible average age,

$30 \times 51 + xy = 38\,(30 + x)$

$\Rightarrow 390 = (38 - y)$

For y maximum $x = 39$

$\Rightarrow 38 - y = 10$

$\Rightarrow y = 28$ years

46. (D) A.T.Q,

Let the speed of Partha $\rightarrow$ P km/hr

Speed of Narayan $\rightarrow$ N km/hr

$$\frac{60}{P} - \frac{60}{N} = 4$$

$$\frac{60}{N} - \frac{30}{P} = 2$$

$$\frac{30}{P} = 6 \Rightarrow P = 5 \text{ km/hr}$$

47. (B) Let the filling pipes capacity $\rightarrow x$

Draining pipes capacity $\rightarrow y$

$$\frac{6}{x} - \frac{5}{y} = \frac{1}{6} \text{ and } \frac{5}{x} - \frac{6}{y} = \frac{1}{60}$$

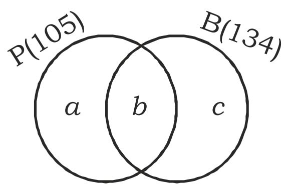
$x = 12$ hours, $y = 15$ hours

When 2 filling pipes and one draining pipe,

$$\Rightarrow \frac{2}{12} - \frac{1}{15} = \frac{1}{10}$$

Then the tank are filled in 10 hours

48. (D) A.T.Q,



$a + 2b + c = 239$ ....(i)

$a + b + c = 200$ ....(ii)

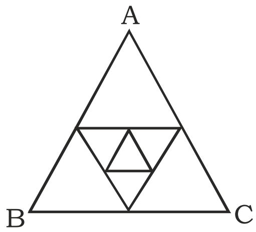
From equation (i) and (ii)

So, maximum value of C is = 95

Number of students who like Burger only = 134 – 105 = 29

$29 \leq$ Burger ≤ 95

49. (D) A.T.Q,



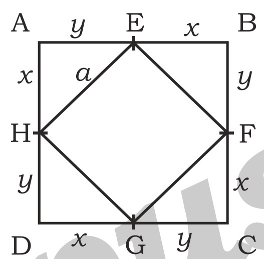
Let the area of $\Delta ABC = x$

$$x + \frac{x}{4} + \frac{x}{16} + \ldots\ldots$$

It is an infinite G.P

$$\frac{x}{1 - \frac{x}{4}} = \frac{4x}{3} = 4 \times \frac{\sqrt{3}}{4} \times 576 = 192\sqrt{3}$$

50. (D) A.T.Q,



$$62.5\% = \frac{5}{8}$$

In ΔAEN

$x^2 + y^2 = a^2$

Let $x + y = 8$

Area of squares ABCD = 64

Area of squares EFGH = $64 \times \frac{5}{8} = 40$

$x^2 + y^2 = 40$

$x + y = 8$

Let, $x = 2$, $y = 6$

Required ratio = $\frac{EB}{CG} = \frac{2}{6} = \frac{1}{3}$

51. (B) ATQ,

Let Raju have $4x$ marbels and Lalitha have $9x$

After giving some marbles by lalitha to raju

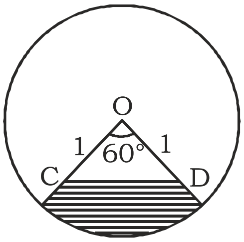
$$\frac{4x + y}{9x - y} = \frac{5}{6}$$

$$\Rightarrow \frac{x}{y} = \frac{11}{21}$$

L $\rightarrow$ 99

Required ratio = $\frac{21}{99} = \frac{7}{33}$

52. (B) A.T.Q,



Radius = 1 cm
OC = OD

Area of ΔOCD = $\frac{R}{2}$

$= \frac{1}{2}\left(\pi(1)^2 \times \frac{1}{6}\right)$

Area of ΔCOD = $\frac{\pi}{12}$

Area of ΔOCD = $\frac{\pi}{12}$

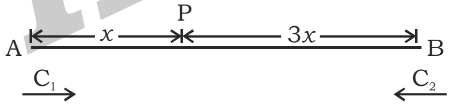
$\frac{1}{2}OC^2 \times \frac{\sqrt{3}}{2} = \frac{\pi}{12}$

$\Rightarrow OC^2 = \left(\frac{\pi}{3\sqrt{3}}\right)^{1/2}$

$\Rightarrow OC = \left(\frac{\pi}{3\sqrt{3}}\right)^{1/2}$

Then the length of OC = $\left(\frac{\pi}{3\sqrt{3}}\right)^{1/2}$

53. (B) A.T.Q,
Let two points A and B



Speed $2y$

$\frac{3x}{y} - \frac{x}{2y} = 1$

$\Rightarrow \frac{x}{y} = \frac{2}{5}$

$\Rightarrow \frac{x}{2y} = \frac{2}{5 \times 2} \times 60 = 12$ minutes

54. (C) A.T.Q,

	First	Second
Ins L.A	$\frac{11}{10} \times \frac{11}{10}$	$\frac{121}{100}$

210 units $\rightarrow$ ₹2,10,000
121 units $\rightarrow$ ₹121,000
Hence, each instalments is $\rightarrow$ ₹121,000

55. (A) A.T.Q,
Total sales tax = ₹(136.75 – 130)

$\frac{9y}{100} = 6.75$

y = ₹ 75

56. (D) When Sonu born sum of ages
S $\rightarrow$ 66
Age $\rightarrow$ 0
Average of S family at born of

Sonu = $\frac{66}{5} = 13.2$

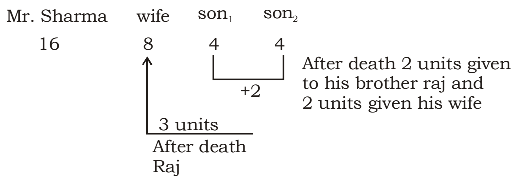
Present Average

S $\longrightarrow \frac{96}{5} = 19.2$

Difference in average = 19.2 – 13.2 = 6 years
Average is increased by 6
So, age of sonu = 6 years
Father age's = 6 × 6 = 36 years
Present age's of sonu father = 48 years

57. (B) A.T.Q,
4 lemon + 10 oranges
↓
2 bottles of oranges
Total 3 oranges bottles
x, y and z have one bottles each
z pays ₹50
Hence cost price of one bottle of orange is ₹50

58. (C) A.T.Q,
Let total property are = 16 units



11 units $\longrightarrow$ 88 k

1 unit $\longrightarrow$ 8 k

16 units $\longrightarrow$ ₹128,000

59. (B) A.T.Q,
Case – I

9 observation $\boxed{30}$ 9 observation
10th

Case – II
When two more observation median are lies between the 21 observation hence median does not change.
Because median are positional function
So, median remains same

60. (D) A : B

64,000 : 112,000

After C join total profit 11 units is divided among three

11 = P

$\frac{11}{3}$ $\frac{11}{3}$ $\frac{11}{3}$

A	B
$4-\frac{11}{3}$	$7-\frac{11}{3}$
↓	↓
Loss of A	Loss of B

$11 \rightarrow 2,20,000$

$1 \rightarrow 20,000$

A	:	B	:	C
4	:	7		
$\frac{11}{3}$		$\frac{11}{3}$	:	$\frac{11}{3}$
$\frac{1}{3}$		$\frac{10}{3}$		

₹ 2,20,000

A	:	B
1	:	10
₹20,000		₹2,00,000

61. (B) A.T.Q,

Case – I

Let cost price

Peanuts $\rightarrow$ ₹ x/kg

Walnut $\rightarrow$ ₹ $3x$/kg

P $\rightarrow x$	W $\rightarrow 3x$
8 kg	6kg
10%	20%

$8 \times \frac{11}{10}x + 16 \times \frac{18x}{5}$ = CP for shopkeeper

Case – II

After losing 5 kg walnuts and 3 kg peanuts,

$\text{CP} \times \frac{5}{4} = 166 \times 16$

$\text{CP} = \frac{166 \times 16 \times 4}{5}$

$\frac{8 \times 11x}{16} + 16 \times \frac{18x}{5} = 166 \times \frac{4}{5} \times 16$

$x = 32$

$3x = 96$

Hence, cost price of walnuts is ₹96/kg

62. (B) Let CP = ₹100

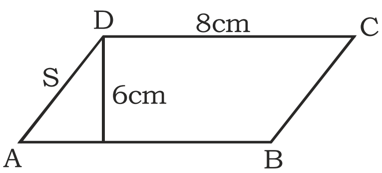
700 A $\longrightarrow$ SP = 160

1 A $\longrightarrow$ SP = $\frac{160}{700} = \frac{8}{35}$

730 articles $\longrightarrow$ SP = $\frac{8}{35} \times 730 = 167$

Profit = 67%

63. (A) A.T.Q,



$\because$ Area = 48

b × h = 48

h = 6 cm

S $\geq$ 6

64. (C) 33 men × 30 days = 990

44 + 43 + 42 ....

$\frac{n}{2}[2a + (n-1)d]$

$\frac{n}{2}[88 + (n-1)(-1)] = 990$

$\frac{n}{2}[89 - n] = 990$

Put value of n from options or assume yourself

$n = 44$

$\frac{44}{2}[89 - 44] \Rightarrow 22 \times 45 = 990$

$\therefore$ minimum number of days to finish the work = 44 days

65. (D) A.T.Q,

Let numbers are x, y and 73

$xy \times 73 - xy \times 37 = 720$

$xy = 20$

minimum value of $x^2 + y^2$

$x = 20$

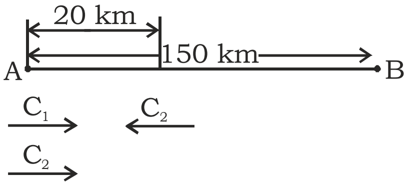
$x = 2\sqrt{5}$ and $y = 2\sqrt{5}$

minimum value = $x^2 + y^2 = 2 \times x^2$

$= 2 \times \left(2\sqrt{5}\right)^2$

$= 2 \times 4 \times 5 = 40$

66. (A) A.T.Q,



Total time taken to cover 150 km

$= \frac{50}{100} + \frac{50}{50} + \frac{50}{25}$

$= \frac{1}{2} + 1 + 2 = 3$ hours 30 minutes

Time taken to car_1 to total 20 km

$= \frac{20}{100} = \frac{1}{5}$ hours = 12 minutes

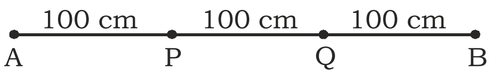
Car_2 start travel at A after 12 minutes
Hence Car_2 travel 3 hours 18 minutes
Car_2, first 50 km + 50 km
30 minutes + 1 hour = 1 hour 30 minutes
Remaining time = 1 hour 48 minutes

$= \frac{9}{5}$ hours

Distance $= \frac{9}{5} \times 25 = 45$ km

Difference = 50 km – 45 km = 5 km

67. (B) A.T.Q,



$\frac{200}{C_1} = \frac{100}{C_3} \Rightarrow \frac{C_1}{C_2} = \frac{2}{1}$

$\frac{C_3}{C_2} = \frac{2}{1}$

$C_1 : C_2 : C_3$
2 : 1 : 1
2 : 2 : 1
4 : 2 : 1

Required ratio $= \frac{1}{4}$

68. (B) A.T.Q,

$(a + b + c)\left(\frac{1}{a} + \frac{1}{b} + \frac{1}{c}\right)$

$= 1 + \frac{a}{b} + \frac{a}{c} + \frac{b}{a} + 1 + \frac{b}{c} + \frac{c}{a} + \frac{c}{b} + 1$

$= 3 + \left(\frac{a}{b} + \frac{b}{a}\right) + \left(\frac{b}{c} + \frac{c}{b}\right) + \left(\frac{c}{a} + \frac{a}{a}\right)$

Let, $\frac{a}{b} = x$, $\frac{b}{c} = y$, $\frac{c}{a} = z$

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

Now, minimum value = 3 + 2 + 2 + 2 = 9

69. (A) Putting the value of $x = y = z = 2$ and $a = b = c = 3$ in all equation

$\Rightarrow \frac{a}{a+3x} + \frac{b}{b+3y} + \frac{c}{c+3z}$

$= \frac{3}{9} + \frac{3}{9} + \frac{3}{9} = \frac{9}{9} = 1$

70. (B) A.T.Q,
$a = 1$, $b = -1$, $c = 0$,
$a + b + c = 0$

$\Rightarrow \frac{2\left(a^4 + b^4 + c^4\right)}{\left(a^2 + b^2 + c^2\right)} = \frac{2(1+1+0)}{(1+1+0)} = 2$

71. (C) Let, $\frac{x}{y} = \frac{z}{w} = k$

$x = ky$ and $z = kw$

$\Rightarrow \frac{x^m + y^m + z^m + w^m}{x^{-m} + y^{-m} + z^{-m} + w^{-m}}$

$= \frac{k^m y^m + y^m + k^m w^m + w^m}{k^{-m} y^{-m} + y^{-m} + k^{-m} w^{-m} + w^{-m}}$

$= \frac{y^m\left(k^m + 1\right) + w^m\left(k^m + 1\right)}{y^{-m}\left(k^{-m} + 1\right) + w^{-m}\left(k^{-m} + 1\right)}$

$= \frac{\left(k^m + 1\right)\left(y^m + w^m\right)}{\left(k^{-m} + 1\right)\left(y^{-m} + w^{-m}\right)}$

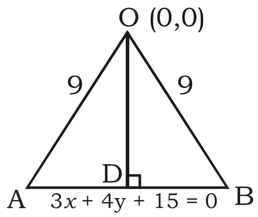
$= \frac{\left(k^m + 1\right)\left(y^m + w^m\right)}{\left(\frac{1}{k^m} + 1\right)\left(\frac{1}{y^m} + \frac{1}{w^m}\right)}$

$= \frac{\left(k^m + 1\right)\left(y^m + w^m\right)}{\frac{\left(k^m + 1\right)}{k^m} \cdot \frac{\left(y^m + w^m\right)}{y^m . w^m}}$

$= k^m y^m w^m = (kyw)^m = (k^2 y^2 w^2)^{m/2}$
$= (ky.y.w.kw)^{m/2} = (xyzw)^{m/2}$

72. (C) $x^2 (x + y + z) = 36$ ....(i)
$y^2 (x + y + z) = 46$ ....(ii)
$x^2 (x + y + z) = 63$ ....(iii)
$xy (x + y + z) = 111$
$\Rightarrow 2xy (x + y + z) = 222$ ....(iv)
$yz (x + y + z) = 99$
$\Rightarrow 2yz (x + y + z) = 198$ ....(v)
$zx(x + y + z) = 82$
$\Rightarrow 2zx(x + y + z) = 164$ ...(vi)
Adding all 6 equation,
$\Rightarrow (x+y+z)(x^2+y^2+z^2+2xy+2yz+2zx) = 729$
$\Rightarrow (x + y + z)(x + y + z)^2 = 729$
$\Rightarrow (x + y + z)^3 = 729$
$\Rightarrow x + y + z = 9$
Putting the value of x + y + z = 9 in equation (i)
$9x^2 = 36$
$x^2 = 4$
$x = 2$

73. (A) A.T.Q,



the distance from the point (0, 0) on the line $3x + 4y + 15 = 0$ is OD

$$OD = \left|\frac{0+0-15}{\sqrt{3^2+4^2}}\right| = 3$$

$$BD = \sqrt{OB^2 - DB^2} = \sqrt{9^2 - 3^2} = \sqrt{72} = 6\sqrt{2}$$

$AB = 2 \times BD = 12\sqrt{2}$

(OAB is an isosceles triangle)

The area of triangle OAB = $\frac{1}{2} \times 12\sqrt{2} \times 3$

$= 18\sqrt{2}$

74. (C) $\tan 70° = \frac{\tan 80° - \tan 10°}{1 + \tan 80° \tan 10°}$

$(\because \tan 80° \tan 10° = 1)$

$2\tan 70° + \tan 10° = \tan 80°$

75. (C) $\tan^n 1° \tan^n 2° \tan^n 3° \ldots\ldots \tan 88° \tan 89° = 1$

($\because \tan^n 1° = \cot^n 89°$ व $\tan^n 89°.\cot^n 89° = 1$)

76. (C) $\tan^5\theta.\tan^5 5\theta = 1$

$(\tan\theta.\tan 5\theta)^5 = 1$

$\tan\theta.\tan 5\theta = 1$

$\theta + 5\theta = 90°$

$6\theta = 90°$

$3\theta = 45°$

$\tan^n 45° = 1$

77. (C) $A + B = 90°$

$\tan A = \cot B$ $(\Rightarrow \tan A. \tan B = 1)$

$\tan B = \cot A$

$\sin A = \cos B$

$\sin B = \cos A$

$$= \sqrt{\frac{\tan A \tan B + \tan A \tan B}{\cos B.\sec B} - \frac{\cos^2 A}{\cos^2 A}}$$

$$= \sqrt{\frac{2\tan A \tan B}{1} - 1}$$

$$= \sqrt{2-1} = 1$$

78. (B) $\frac{T_3 - T_5}{T_1} = \frac{\sin^3\theta + \cos^3\theta - \sin^5\theta - \cos^5\theta}{\sin\theta + \cos\theta}$

$$= \frac{\sin^3\theta(1-\sin^2\theta) + \cos^3\theta(1-\cos^2\theta)}{\sin\theta + \cos\theta}$$

$$= \frac{\sin^2\theta\cos^2\theta + \cos^3\theta\sin^2\theta}{\sin\theta + \cos\theta}$$

$$= \frac{\sin^2\theta\cos^2\theta(\sin\theta + \cos\theta)}{\sin\theta + \cos\theta}$$

$= \sin^2\theta.\cos^2\theta$

79. (B) $\cos(\theta - A) = a$, $\cos(\theta - B) = b$

Let, $\theta = 90°$

$a = \cos(90° - A) = \sin A$,

$b = \cos(90° - B) = \sin B$

$\cos A = \sqrt{1-a^2}$, $\cos B = \sqrt{1-b^2}$

$\Rightarrow \sin^2(A - B) + 2ab\cos(A - B)$

$= (\sin A\cos B - \cos A\sin B)^2 + 2ab(\cos A\cos B + \sin A\sin B)$

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

$$2ab\left(\sqrt{1-a^2}.\sqrt{1-b^2} + ab\right)$$

$= a^2(1-b^2) + b^2(1-a^2) - 2ab\sqrt{1-a^2}.\sqrt{1-b^2} + 2ab\sqrt{1-a^2}.\sqrt{1-b^2} + 2a^2b^2$

$= a^2 - a^2b^2 + b^2 - a^2b^2 + 2a^2b^2 = a^2 + b^2$

80. (C) $3\cos\theta = 5\sin\theta$

$\tan\theta = \frac{3}{5} \Rightarrow \sec\theta = \sqrt{1+\tan^2\theta}$

$$= \sqrt{1+\frac{9}{25}} = \sqrt{\frac{34}{5}}$$

$$= \frac{(5\tan\theta - 2\sec^4\theta + 2)}{(5\tan\theta + 2\sec^4\theta - 2)} = \frac{5 - 2\sec^4\theta}{1 + 2\sec^4\theta}$$

$$= \frac{5 - 2\left(\frac{1156}{625}\right)}{1 + 2\left(\frac{1156}{625}\right)} = \frac{271}{979}$$

81. (A) $\frac{\sin A - \sin C}{\cos C - \cos A} = \cot B$

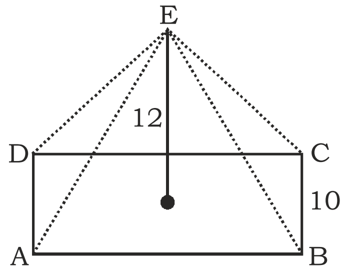
$$= \frac{2\cos\frac{A+C}{2}.\sin\frac{A-C}{2}}{2\sin\frac{A+C}{2}.\sin\frac{A-C}{2}} = \cot B$$

$$= \cot\left(\frac{A+C}{2}\right) = \cot B$$

$\frac{A+C}{2} = B = $ A.P

82. (B) A.T.Q,

Total surface area of the pyramid = curve surface area + perimeter of base × slant height



$l_1 = \sqrt{(5)^2 + (12)^2}$ = 13 cm

Similarly, side AD and slant height CD

$l_2 = \sqrt{(16)^2 + (12)^2}$ = 20 cm

Area of triangle sides AB and CD,

$= 2 \times \frac{1}{2} \times 32 \times 13 = 416 \text{ cm}^2$

Area of triangle sides AD and BC,

$= 2 \times \left(\frac{1}{2} \times 20 \times 10\right) = 200 \text{ cm}^2$

Curve surface area= 416 + 200 = 616 cm^2

Base area = 32 × 10 = 320 cm^2

Total surface area of pyramid = 616 + 320 = 936 cm^2

83. (C) area of the hexagonal having base a

$= \frac{3\sqrt{3}}{2} a^2$

$\frac{3\sqrt{3}}{2} a^2 = 96\sqrt{3} \Rightarrow a = 8\text{m}$

Let the height of the pyramid is h cm, then area of the pyramid of one face

$= \frac{1}{2} a \times l$ (where l is slant height)

$\frac{1}{2} a \times l = 32\sqrt{3} \Rightarrow \text{l} = 8\sqrt{3}$

$\frac{3a^2}{4} + h^2 = l^2 \Rightarrow \frac{3 \times 64}{4} + h^2 = 64 \times 3$

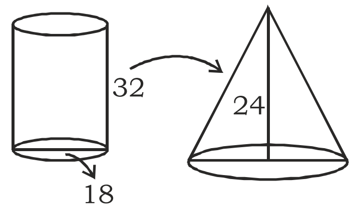
$h^2 = 64 \times 3 \left[1 - \frac{1}{4}\right] = 196$

$\Rightarrow h = 12\text{m}$

$\therefore$ Volume of the pyramid $= \frac{1}{3} \times$ base area $\times h$

$= \frac{1}{3} \times 96\sqrt{3} \times 12 = 384\sqrt{3} \text{ m}^3$

84. (C)



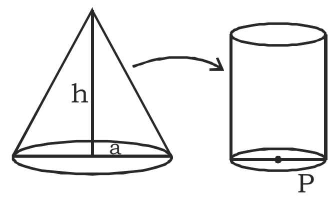
Volume of cylinder = volume of cone

$\pi r^2 h = \frac{1}{3} \pi r^2_1 h_1$

$\pi \times 18 \times 18 \times 32 = \frac{1}{3} \pi \times r^2 \times 24$

$r = 36$ cm

85. (A)



$\pi r^2 \text{h}_2 = \frac{1}{3} \pi r^2 \text{h}$

$\pi \text{P}^2 \text{h}_1 = \frac{1}{3} \pi a^2 \text{h}$

$\text{h}_1 = \frac{a^2 h}{3\text{P}^2}$

86. (C) Area of the shaded region,

$= \frac{1}{2}\pi(14)^2 + \frac{1}{2}\pi(7)^2 + \frac{1}{2}(7)^2$

$= \frac{1}{2}\pi(196 + 49 + 49)$

$= \frac{1}{2} \times \frac{22}{7} \times 294 = 462 \text{ cm}^2$

87. (A) Area of larger square= a^2

Diagonal of smaller square ABCD = a

Side of smaller square $= \frac{a}{\sqrt{2}}$

Now,

Side of smaller square = diameter of circle $= \frac{a}{\sqrt{2}}$

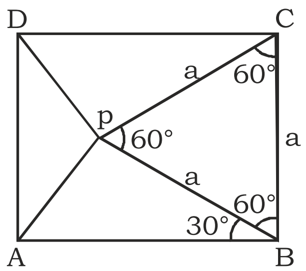
Height of equilateral triangle $= \frac{3}{4} \times \frac{a}{\sqrt{2}}$

$= \frac{3a}{4\sqrt{2}}$

Hence,

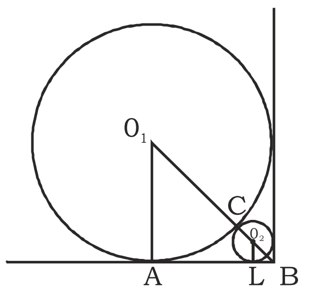
side of equilateral triangle $= \frac{\sqrt{3}a}{2\sqrt{2}}$

88. (C) A.T.Q,
BPC is an equilateral so all angles are 60°



$\therefore$ In ΔABP
$\therefore$ AB = BP = a (side os square)
$\therefore$ $\angle APB = \angle BAP = 75°$
$\therefore$ similarly, $\angle DPC = 75°$
$\because$ $60° + 75° + 75° + \angle APD = 360°$
$\angle APD = 150°$

89. (B) ATQ,



Let say 'r' is the radius of the smaller circle,
$\therefore$ $O_1A = AB = 2$
$\therefore$ $O_2B = 2\sqrt{2}$
$\therefore$ $O_1C + CB = O_1B$
$2 + CO_2 + O_2B = 2\sqrt{2}$
$2 + r + r\sqrt{2} = 2\sqrt{2}$
$R = \frac{2(\sqrt{2}-1)}{\sqrt{2}+1} = 6 - 4\sqrt{2}$

90. (A) A.T.Q,
BC = 2 cm
BP = AP = CD= QD = 2 cm
$= 2 \times 3\pi r_s + 2\pi r_1 \times 2 + 2pr_m$
$= 2 \times 2\pi \times 1 + 2 \times \pi \times 2 + 2\pi \times 1$
$= 8\pi + 2\pi = 10\pi$ cm

91. (C)

Year	Number of students employed	Number of student employed from finance	Number of student employed from marketing
1992	800	0.22×800 = 175	0.36×800 = 288
1993	650	0.17×650 = 1105	0.48×650 = 312
1994	1100	0.23×1100 = 253	0.43×1100 = 473
1995	1200	0.19×1200 = 226	0.37×1200 = 444
1996	1000	0.32×1000 = 320	0.32×1000 = 320
Total		1087.50	1837

Required difference,
= 1837 – 1087.5
= 179.5 = 750

92. (D) Average salary of finance in 1992
= ₹5450 thousand
average salary of finance in 1996
= ₹9810 thousand
$\therefore$ Required percentage increase
$= \frac{9810-5450}{5450} \times 100\%$
$= \frac{4360}{5450} \times 100\% = 80\%$

93. (C) Salary offered in software
in = 1992 = ₹5290 thousand
in = 1996 = ₹8640 thousand
$\therefore$ Percentage increase
$= \frac{8640-5290}{5290} \times 100\%$
$= \frac{3350}{5290} \times 100\% = 63.32\%$
Thus, required average annual increase
rate = $\frac{1}{4} \times 63.32 = 15.9\%$

94. (A) Average monthly salary to a marketing student,
in 1992 = ₹5170 thousand
in 1996 = ₹10220 thousand
$\therefore$ Required percentage increase
$= \frac{10220-5170}{5170} \times 100\%$
$= \frac{5050}{5170} \times 100\% = 98\%$

95. (B) In 1994, students seeking jobs in finance earned,
= 23% of 1100 × 7550
= ₹1910150
Students seeking jobs in software earned
= 21% of 1100 × 7050
= ₹1628550
$\therefore$ Difference in the amount earned
= 1910150 – 1628550 = 281600
= ₹2.81 lakh per annum
= ₹2.81 × 12 lakh per annum
= ₹33.8 lakh per annum

Using this chart for giving answer (96-100)

Total number of students in the school = 3000

Number of girls = $\frac{7}{15} \times 3000 = 1400$

Number of boys = $\frac{8}{15} \times 3000 = 1600$

Number of boys studying only English = 30% of 1600 = 480

Number of girls studying only English and Hindi = $\frac{2}{7}$th of 1400

Number of boys studying English and Marathi only = $\frac{1}{8}$th of 1600

Number of girls studying only English = 85% of 480 = 408

Number of boys studying only Hindi and Marathi = $\frac{2}{5}$th of 1600 = 640

Number of girls studying only hindi = 40% of 1400 = 560 Number of girls studying only Hindi and Marathi

= 1400 – (400 + 408 + 560)

= 1400 – 1368 = 32

Number of boys studying only English and Hindi

= 10% of 400 = 40

Number of boys studying only Hindi

= 1600 – (480 + 200 + 640 + 40)

= 1600 – 1360 = 240

The tabular form of above information is as follows.

Subjects	Number of girls	Number of boys
Hindi	560	240
English	408	480
Marathi	-	-
Hindi+English	400	40
English+Marathi	-	200
Hindi+Marathi	32	640
Total	1400	1600

96. (A) Total number of boys studying English = 480 + 40 + 200 = 720
Total number of girls studying English = 408 + 400 = 808
$\therefore$ Required ratio = 720 : 808 : = 90 : 101

97. (D) Number of boys studying only Hindi = 240 and number of girls studying Hindi = 560 + 400 + 320 = 992
$\therefore$ Required percentage,
$= \frac{240}{992} \times 100\% = 24.19\%$

98. (B) Total number of students studying only English = 408 + 480 = 888

99. (D) Number of girls studying Marathi = 32
$\therefore$ Number of girls not studying Marathi = 1400 – 32 = 1368

100. (C) Total number of girls studying Hindi = 560 + 400 + 32 = 992

SSC TIER II (MATHS) MOCK TEST - 52 (ANSWER KEY)

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

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