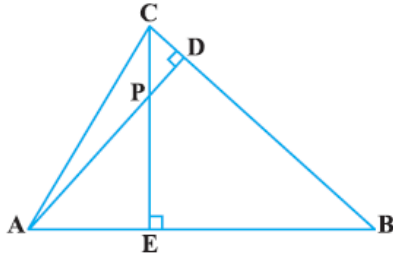
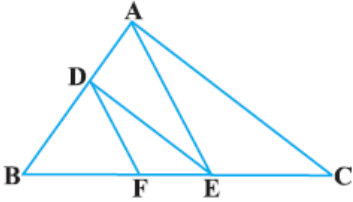
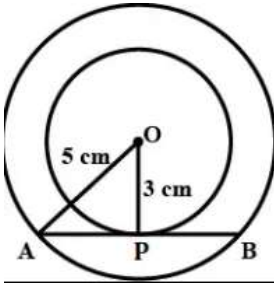


Class- X
Mathematics Basic (241)
Marking Scheme SQP-2022-23

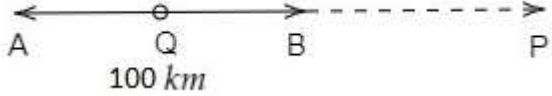
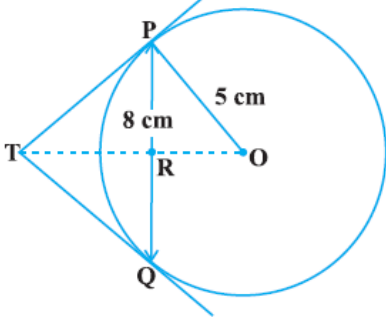
Time Allowed: 3 Hours

Maximum Marks: 80

Section A		
1	(c) a^3b^2	1
2	(c) 13 km/hours	1
3	(b) -10	1
4	(b) Parallel.	1
5	(c) $k = 4$	1
6	(b) 12	1
7	(c) $\angle B = \angle D$	1
8	(b) 5 : 1	1
9	(a) 25°	1
10	(a) $\frac{\sqrt{3}}{2}$	1
11	(c) $\sqrt{3}$	1
12	(b) 0	1
13	(b) 14 : 11	1
14	(c) 16 : 9	1
15	(d) $147\pi \text{ cm}^2$	1
16	(c) 20	1
17	(b) 8	1
18	(a) $\frac{3}{26}$	1
19	(d) Assertion (A) is false but Reason (R) is true.	1

20	(a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).	1
Section B		
21	<p>For a pair of linear equations to have infinitely many solutions :</p> $\frac{a_1}{a_2} = \frac{b_1}{b_2} = \frac{c_1}{c_2} \Rightarrow \frac{k}{12} = \frac{3}{k} = \frac{k-3}{k}$ $\frac{k}{12} = \frac{3}{k} \Rightarrow k^2 = 36 \Rightarrow k = \pm 6$ <p>Also, $\frac{3}{k} = \frac{k-3}{k} \Rightarrow k^2 - 6k = 0 \Rightarrow k = 0, 6.$</p> <p>Therefore, the value of k, that satisfies both the conditions, is $k = 6.$</p>	<p>1/2</p> <p>1/2</p> <p>1/2</p> <p>1/2</p>
22	<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;">  </div> <div style="width: 65%;"> <p>(i) In $\triangle ABD$ and $\triangle CBE$ $\angle ADB = \angle CEB = 90^\circ$ $\angle ABD = \angle CBE$ (Common angle) $\Rightarrow \triangle ABD \sim \triangle CBE$ (AA criterion)</p> <p>(ii) In $\triangle PDC$ and $\triangle BEC$ $\angle PDC = \angle BEC = 90^\circ$ $\angle PCD = \angle BCE$ (Common angle) $\Rightarrow \triangle PDC \sim \triangle BEC$ (AA criterion)</p> <p style="text-align: center;">[OR]</p> <p>In $\triangle ABC$, $DE \parallel AC$ $BD/AD = BE/EC$(i) (Using BPT)</p> <p>In $\triangle ABE$, $DF \parallel AE$ $BD/AD = BF/FE$(ii) (Using BPT)</p> <p>From (i) and (ii) $BD/AD = BE/EC = BF/FE$</p> <p>Thus, $\frac{BF}{FE} = \frac{BE}{EC}$</p> </div> </div> <div style="width: 30%; margin-top: 20px;">  </div>	<p>1/2</p> <p>1/2</p> <p>1/2</p> <p>1/2</p> <p>1/2</p> <p>1/2</p> <p>1/2</p>
23	<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;">  </div> <div style="width: 65%;"> <p>Let O be the centre of the concentric circle of radii 5 cm and 3 cm respectively. Let AB be a chord of the larger circle touching the smaller circle at P</p> <p>Then $AP = PB$ and $OP \perp AB$</p> <p>Applying Pythagoras theorem in $\triangle OPA$, we have $OA^2 = OP^2 + AP^2 \Rightarrow 25 = 9 + AP^2$ $\Rightarrow AP^2 = 16 \Rightarrow AP = 4 \text{ cm}$ $\therefore AB = 2AP = 8 \text{ cm}$</p> </div> </div>	<p>1/2</p> <p>1/2</p> <p>1/2</p> <p>1/2</p>
24	<p>Now, $\frac{(1 + \sin\theta)(1 - \sin\theta)}{(1 + \cos\theta)(1 - \cos\theta)} = \frac{(1 - \sin^2\theta)}{(1 - \cos^2\theta)}$</p> $= \frac{\cos^2\theta}{\sin^2\theta} = \left(\frac{\cos\theta}{\sin\theta}\right)^2$ $= \cot^2\theta$ $= \left(\frac{7}{8}\right)^2 = \frac{49}{64}$	<p>1/2</p> <p>1/2</p> <p>1/2</p> <p>1/2</p>

25	<p>Perimeter of quadrant = $2r + \frac{1}{4} \times 2 \pi r$</p> <p>$\Rightarrow$ Perimeter = $2 \times 14 + \frac{1}{2} \times \frac{22}{7} \times 14$</p> <p>$\Rightarrow$ Perimeter = $28 + 22 = 28 + 22 = 50$ cm</p> <p style="text-align: center;">[OR]</p> <p>Area of the circle = Area of first circle + Area of second circle</p> <p>$\Rightarrow \pi R^2 = \pi (r_1)^2 + \pi (r_1)^2$</p> <p>$\Rightarrow \pi R^2 = \pi (24)^2 + \pi (7)^2 \Rightarrow \pi R^2 = 576\pi + 49\pi$</p> <p>$\Rightarrow \pi R^2 = 625\pi \Rightarrow R^2 = 625 \Rightarrow R = 25$ Thus, diameter of the circle = $2R = 50$ cm.</p>	<p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p> <p>1</p> <p></p> <p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p> <p>1</p>
Section C		
26	<p>Let us assume to the contrary, that $\sqrt{5}$ is rational. Then we can find a and b ($\neq 0$) such that $\sqrt{5} = \frac{a}{b}$ (assuming that a and b are co-primes).</p> <p>So, $a = \sqrt{5} b \Rightarrow a^2 = 5b^2$</p> <p>Here 5 is a prime number that divides a^2 then 5 divides a also (Using the theorem, if a is a prime number and if a divides p^2, then a divides p, where a is a positive integer)</p> <p>Thus 5 is a factor of a</p> <p>Since 5 is a factor of a, we can write $a = 5c$ (where c is a constant). Substituting $a = 5c$</p> <p>We get $(5c)^2 = 5b^2 \Rightarrow 5c^2 = b^2$</p> <p>This means 5 divides b^2 so 5 divides b also (Using the theorem, if a is a prime number and if a divides p^2, then a divides p, where a is a positive integer).</p> <p>Hence a and b have at least 5 as a common factor.</p> <p>But this contradicts the fact that a and b are coprime. This is the contradiction to our assumption that p and q are co-primes.</p> <p>So, $\sqrt{5}$ is not a rational number. Therefore, the $\sqrt{5}$ is irrational.</p>	<p>1</p> <p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p>
27	<p>$6x^2 - 7x - 3 = 0 \Rightarrow 6x^2 - 9x + 2x - 3 = 0$</p> <p>$\Rightarrow 3x(2x - 3) + 1(2x - 3) = 0 \Rightarrow (2x - 3)(3x + 1) = 0$</p> <p>$\Rightarrow 2x - 3 = 0$ & $3x + 1 = 0$</p> <p>$x = 3/2$ & $x = -1/3$ Hence, the zeros of the quadratic polynomials are $3/2$ and $-1/3$.</p> <p>For verification</p> <p>Sum of zeros = $\frac{-\text{coefficient of } x}{\text{coefficient of } x^2} \Rightarrow 3/2 + (-1/3) = -(-7) / 6 \Rightarrow 7/6 = 7/6$</p> <p>Product of roots = $\frac{\text{constant}}{\text{coefficient of } x^2} \Rightarrow 3/2 \times (-1/3) = (-3) / 6 \Rightarrow -1/2 = -1/2$</p> <p>Therefore, the relationship between zeros and their coefficients is verified.</p>	<p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p> <p>1</p> <p>1</p>
28	<p>Let the fixed charge by Rs x and additional charge by Rs y per day</p> <p>Number of days for Latika = $6 = 2 + 4$</p> <p>Hence, Charge $x + 4y = 22$</p> <p>$x = 22 - 4y$(1)</p> <p>Number of days for Anand = $4 = 2 + 2$</p> <p>Hence, Charge $x + 2y = 16$</p> <p>$x = 16 - 2y$ (2)</p> <p>On comparing equation (1) and (2), we get,</p>	<p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p>

	<p> $22 - 4y = 16 - 2y \Rightarrow 2y = 6 \Rightarrow y = 3$ Substituting $y = 3$ in equation (1), we get, $x = 22 - 4(3) \Rightarrow x = 22 - 12 \Rightarrow x = 10$ Therefore, fixed charge = Rs 10 and additional charge = Rs 3 per day [OR] </p>  <p> $AB = 100$ km. We know that, Distance = Speed \times Time. $AP - BP = 100 \Rightarrow 5x - 5y = 100 \Rightarrow x - y = 20 \dots (i)$ $AQ + BQ = 100 \Rightarrow x + y = 100 \dots (ii)$ Adding equations (i) and (ii), we get, $x - y + x + y = 20 + 100 \Rightarrow 2x = 120 \Rightarrow x = 60$ </p> <p> Substituting $x = 60$ in equation (ii), we get, $60 + y = 100 \Rightarrow y = 40$ </p> <p> Therefore, the speed of the first car is 60 km/hr and the speed of the second car is 40 km/hr. </p>	<p>1</p> <p>1</p> <p>1</p> <p>1</p>
29	 <p> Since OT is perpendicular bisector of PQ. Therefore, $PR = RQ = 4$ cm Now, $OR = \sqrt{OP^2 - PR^2} = \sqrt{5^2 - 4^2} = 3$ cm Now, $\angle TPR + \angle RPO = 90^\circ$ ($\because TPO = 90^\circ$) & $\angle TPR + \angle PTR = 90^\circ$ ($\because TRP = 90^\circ$) So, $\angle RPO = \angle PTR$ So, $\triangle TRP \sim \triangle PRO$ [By A-A Rule of similar triangles] So, $\frac{TP}{PO} = \frac{RP}{RO}$ $\Rightarrow \frac{TP}{5} = \frac{4}{3} \Rightarrow TP = \frac{20}{3}$ cm </p>	<p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p>
30	$ \begin{aligned} \text{LHS} &= \frac{\tan \theta}{1 - \cot \theta} + \frac{\cot \theta}{1 - \tan \theta} = \frac{\tan \theta}{1 - \frac{1}{\tan \theta}} + \frac{\frac{1}{\tan \theta}}{1 - \tan \theta} \\ &= \frac{\tan^2 \theta}{\tan \theta - 1} + \frac{1}{\tan \theta (1 - \tan \theta)} \\ &= \frac{\tan^3 \theta - 1}{\tan \theta (\tan \theta - 1)} \\ &= \frac{(\tan \theta - 1)(\tan^3 \theta + \tan \theta + 1)}{\tan \theta (\tan \theta - 1)} \\ &= \frac{(\tan^3 \theta + \tan \theta + 1)}{\tan \theta} \\ &= \tan \theta + 1 + \sec \theta = 1 + \tan \theta + \sec \theta \\ &= 1 + \frac{\sin \theta}{\cos \theta} + \frac{\cos \theta}{\sin \theta} \\ &= 1 + \frac{\sin^2 \theta + \cos^2 \theta}{\sin \theta \cos \theta} \end{aligned} $	<p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p>

	$= 1 + \frac{1}{\sin \theta \cos \theta} = 1 + \sec \theta \operatorname{cosec} \theta$ <p style="text-align: center;">[OR]</p> $\sin \theta + \cos \theta = \sqrt{3} \Rightarrow (\sin \theta + \cos \theta)^2 = 3$ $\Rightarrow \sin^2 \theta + \cos^2 \theta + 2 \sin \theta \cos \theta = 3$ $\Rightarrow 1 + 2 \sin \theta \cos \theta = 3 \Rightarrow 1 \sin \theta \cos \theta = 1$ <p>Now $\tan \theta + \cot \theta = \frac{\sin \theta}{\cos \theta} + \frac{\cos \theta}{\sin \theta}$</p> $= \frac{\sin^2 \theta + \cos^2 \theta}{\sin \theta \cos \theta}$ $= \frac{1}{\sin \theta \cos \theta} = \frac{1}{1} = 1$	<p style="text-align: right;">1/2</p> <p style="text-align: right;">1/2</p> <p style="text-align: right;">1/2</p> <p style="text-align: right;">1/2</p> <p style="text-align: right;">1/2</p> <p style="text-align: right;">1/2</p>
31	<p>(i) $P(8) = \frac{5}{36}$</p> <p>(ii) $P(13) = \frac{0}{36} = 0$</p> <p>(iii) $P(\text{less than or equal to } 12) = 1$</p>	<p style="text-align: right;">1</p> <p style="text-align: right;">1</p> <p style="text-align: right;">1</p>
	Section D	
32	<p>Let the average speed of passenger train = x km/h. and the average speed of express train = $(x + 11)$ km/h</p> <p>As per given data, time taken by the express train to cover 132 km is 1 hour less than the passenger train to cover the same distance. Therefore,</p> $\frac{132}{x} - \frac{132}{x+11} = 1$ $\Rightarrow \frac{132(x+11-x)}{x(x+11)} = 1 \Rightarrow \frac{132 \times 11}{x(x+11)} = 1$ $\Rightarrow 132 \times 11 = x(x+11) \Rightarrow x^2 + 11x - 1452 = 0$ $\Rightarrow x^2 + 44x - 33x - 1452 = 0$ $\Rightarrow x(x+44) - 33(x+44) = 0 \Rightarrow (x+44)(x-33) = 0$ $\Rightarrow x = -44, 33$ <p>As the speed cannot be negative, the speed of the passenger train will be 33 km/h and the speed of the express train will be $33 + 11 = 44$ km/h.</p> <p style="text-align: center;">[OR]</p> <p>Let the speed of the stream be x km/hr So, the speed of the boat in upstream = $(18 - x)$ km/hr & the speed of the boat in downstream = $(18 + x)$ km/hr</p> <p>ATQ, $\frac{\text{distance}}{\text{upstream speed}} - \frac{\text{distance}}{\text{downstream speed}} = 1$</p> $\Rightarrow \frac{24}{18-x} - \frac{24}{18+x} = 1$	<p style="text-align: right;">1/2</p> <p style="text-align: right;">1</p> <p style="text-align: right;">1/2</p> <p style="text-align: right;">1</p> <p style="text-align: right;">1</p> <p style="text-align: right;">1/2</p> <p style="text-align: right;">1/2</p> <p style="text-align: right;">1/2</p> <p style="text-align: right;">1/2</p> <p style="text-align: right;">1</p>

$$\Rightarrow 24 \left[\frac{1}{18-x} - \frac{1}{18+x} \right] = 1 \Rightarrow 24 \left[\frac{18+x-(18-x)}{(18-x)(18+x)} \right] = 1$$

$$\Rightarrow 24 \left[\frac{2x}{(18-x)(18+x)} \right] = 1 \Rightarrow 24 \left[\frac{2x}{(18-x)(18+x)} \right] = 1$$

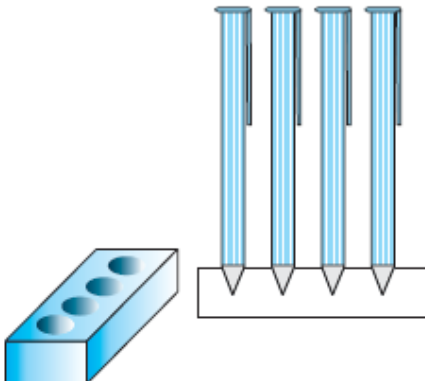
$$\Rightarrow 48x = 324 - x^2 \Rightarrow x^2 + 48x - 324 = 0$$

$$\Rightarrow (x + 54)(x - 6) = 0 \Rightarrow x = -54 \text{ or } 6$$

As speed to stream can never be negative, the speed of the stream is 6 km/hr.

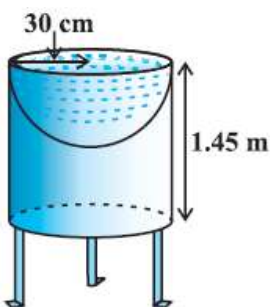
33 Figure
Given, To prove, constructions
Proof
Application ----

34



Volume of one conical depression = $\frac{1}{3} \times \pi r^2 h$
 $= \frac{1}{3} \times \frac{22}{7} \times 0.5^2 \times 1.4 \text{ cm}^3 = 0.366 \text{ cm}^3$
 Volume of 4 conical depression = $4 \times 0.366 \text{ cm}^3$
 $= 1.464 \text{ cm}^3$
 Volume of cuboidal box = $L \times B \times H$
 $= 15 \times 10 \times 3.5 \text{ cm}^3 = 525 \text{ cm}^3$
 Remaining volume of box = Volume of cuboidal box –
 Volume of 4 conical depressions
 $= 525 \text{ cm}^3 - 1.464 \text{ cm}^3 = 523.5 \text{ cm}^3$

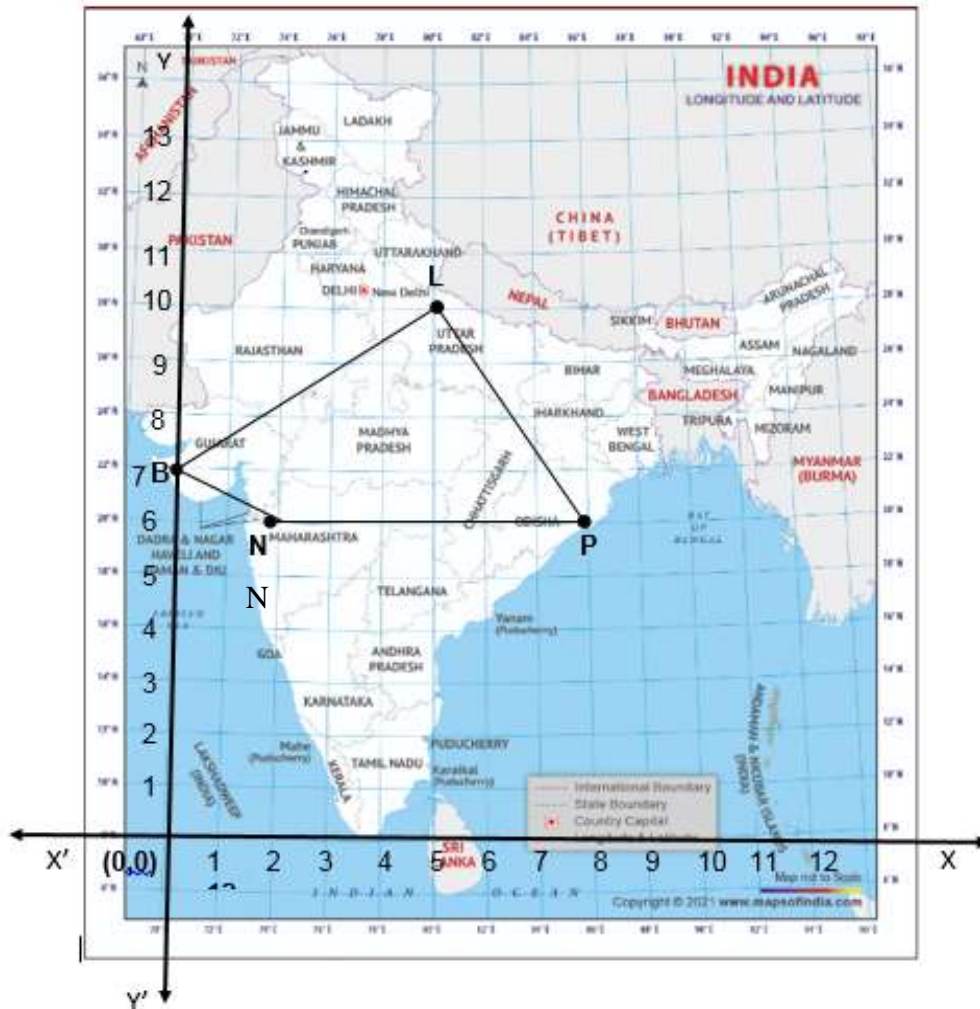
[OR]



Let h be height of the cylinder, and r the common radius of the cylinder and hemisphere.
 Then, the total surface area = CSA of cylinder + CSA of hemisphere
 $= 2\pi rh + 2\pi r^2 = 2\pi r (h + r)$
 $= 2 \times \frac{22}{7} \times 30 (145 + 30) \text{ cm}^2$
 $= 2 \times \frac{22}{7} \times 30 \times 175 \text{ cm}^2$
 $= 33000 \text{ cm}^2 = 3.3 \text{ m}^2$

35	Class Interval	Number of policy holders (f)	Cumulative Frequency (cf)
	Below 20	2	2
	20-25	4	6
	25-30	18	24
	30-35	21	45
	35-40	33	78
	40-45	11	89
	45-50	3	92
	50-55	6	98
	55-60	2	100

	<p>$n = 100 \Rightarrow n/2 = 50$, Therefore, median class = 35 – 40, Class size, $h = 5$, Lower limit of median class, $l = 35$, frequency $f = 33$, cumulative frequency $cf = 45$</p> <p>$\Rightarrow \text{Median} = l + \left[\frac{\frac{n}{2} - cf}{f} \right] \times h$</p> <p>$\Rightarrow \text{Median} = 35 + \left[\frac{50 - 45}{33} \right] \times 5$</p> <p>$= 35 + \frac{25}{33} = 35 + 0.76$</p> <p>$= 35.76$ Therefore, median age is 35.76 years</p>	<p>$\frac{1}{2}$</p> <p>$1\frac{1}{2}$</p> <p>1</p> <p>1</p>	
	Section E		
36	1	<p>Since the production increases uniformly by a fixed number every year, the number of Cars manufactured in 1st, 2nd, 3rd, . . . ,years will form an AP. So, $a + 3d = 1800$ & $a + 7d = 2600$ So $d = 200$ & $a = 1200$</p>	<p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p>
	2	<p>$t_{12} = a + 11d \Rightarrow t_{30} = 1200 + 11 \times 200$ $\Rightarrow t_{12} = 3400$</p>	<p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p>
	3	<p>$S_n = \frac{n}{2} [2a + (n - 1)d] \Rightarrow S_{10} = \frac{10}{2} [2 \times 1200 + (10 - 1) 200]$ $\Rightarrow S_{10} = \frac{13}{2} [2 \times 1200 + 9 \times 200]$ $\Rightarrow S_{10} = 5 \times [2400 + 1800]$ $\Rightarrow S_{10} = 5 \times 4200 = 21000$</p> <p style="text-align: center;">[OR]</p> <p>Let in n years the production will reach to 31200 $S_n = \frac{n}{2} [2a + (n - 1)d] = 31200 \Rightarrow \frac{n}{2} [2 \times 1200 + (n - 1)200] = 31200$ $\Rightarrow \frac{n}{2} [2 \times 1200 + (n - 1)200] = 31200 \Rightarrow n [12 + (n - 1)] = 312$ $\Rightarrow n^2 + 11n - 312 = 0$ $\Rightarrow n^2 + 24n - 13n - 312 = 0$ $\Rightarrow (n + 24)(n - 13) = 0$ $\Rightarrow n = 13$ or -24. As n can't be negative. So $n = 13$</p>	<p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p>
37	Case Study – 2		



1	$LB = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2} \Rightarrow LB = \sqrt{(0 - 5)^2 + (7 - 10)^2}$ $LB = \sqrt{(5)^2 + (3)^2} \Rightarrow LB = \sqrt{25 + 9} \quad LB = \sqrt{34}$ <p>Hence the distance is $150 \sqrt{34}$ km</p>	$\frac{1}{2}$ $\frac{1}{2}$
2	<p>Coordinate of Kota (K) is $\left(\frac{3 \times 5 + 2 \times 0}{3 + 2}, \frac{3 \times 7 + 2 \times 10}{3 + 2}\right)$</p> $= \left(\frac{15+0}{5}, \frac{21+20}{5}\right) = \left(3, \frac{41}{5}\right)$	$\frac{1}{2}$ $\frac{1}{2}$
3	<p>L(5, 10), N(2,6), P(8,6)</p> $LN = \sqrt{(2 - 5)^2 + (6 - 10)^2} = \sqrt{(3)^2 + (4)^2} = \sqrt{9 + 16} = \sqrt{25} = 5$ $NP = \sqrt{(8 - 2)^2 + (6 - 6)^2} = \sqrt{(4)^2 + (0)^2} = 4$ $PL = \sqrt{(8 - 5)^2 + (6 - 10)^2} = \sqrt{(3)^2 + (4)^2} \Rightarrow LB = \sqrt{9 + 16} = \sqrt{25} = 5$ <p>as $LN = PL \neq NP$, so ΔLNP is an isosceles triangle.</p> <p style="text-align: center;">[OR]</p>	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$

	<p>Let A (0, b) be a point on the y – axis then AL = AP</p> $\Rightarrow \sqrt{(5 - 0)^2 + (10 - b)^2} = \sqrt{(8 - 0)^2 + (6 - b)^2}$ $\Rightarrow (5)^2 + (10 - b)^2 = (8)^2 + (6 - b)^2$ $\Rightarrow 25 + 100 - 20b + b^2 = 64 + 36 - 12b + b^2 \Rightarrow 8b = 25 \Rightarrow b = \frac{25}{8}$ <p>So, the coordinate on y axis is $(0, \frac{25}{8})$</p>	<p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p>
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38

Case Study – 3



1	$\sin 60^\circ = \frac{PC}{PA}$ $\Rightarrow \frac{\sqrt{3}}{2} = \frac{18}{PA} \Rightarrow PA = 12\sqrt{3} \text{ m}$	<p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p>
2	$\sin 30^\circ = \frac{PC}{PB}$ $\Rightarrow \frac{1}{2} = \frac{18}{PB} \Rightarrow PB = 36 \text{ m}$	<p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p>
3	$\tan 60^\circ = \frac{PC}{AC} \Rightarrow \sqrt{3} = \frac{18}{AC} \Rightarrow AC = 6\sqrt{3} \text{ m}$ $\tan 30^\circ = \frac{PC}{CB} \Rightarrow \frac{1}{\sqrt{3}} = \frac{18}{CB} \Rightarrow CB = 18\sqrt{3} \text{ m}$ <p>Width AB = AC + CB = $6\sqrt{3} + 18\sqrt{3} = 24\sqrt{3} \text{ m}$</p> <p style="text-align: center;">[OR]</p> <p>RB = PC = 18 m & PR = CB = $18\sqrt{3} \text{ m}$</p> $\tan 30^\circ = \frac{QR}{PR} \Rightarrow \frac{1}{\sqrt{3}} = \frac{QR}{18\sqrt{3}} \Rightarrow QR = 18 \text{ m}$ <p>QB = QR + RB = 18 + 18 = 36m. Hence height BQ is 36m</p>	<p>1</p> <p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p> <p>1</p> <p>$\frac{1}{2}$</p>