

1. (B) 12

2. (B) $2^{p+q} - 1$

3. (A) 11

4. (B) $\frac{1}{2} \times \frac{1}{3} \times \frac{1}{4} \times \frac{1}{5} \times \frac{1}{6}$

5. (A) $\frac{94}{7}$

6. (B) 45°

7. (B) $\angle B = \angle D$

8. (B) $\frac{1}{2} \times \frac{1}{3} \times \frac{1}{4} \times \frac{1}{5}$

9. (A) -1

10. (A) $\frac{3}{2}$

11. (A) 12

12. (A) 3:1:2

13. (A) 37

14. (B) $\frac{23}{26}$

 π

15. $A = \{3, 5\}$

$B = \{2, 4\}$

16.

$4k - 3 = 5$

$4k = 8$

$k = \frac{8}{4}$

$k = 2$

17) $x = -18$

$$18) \frac{x+2}{4y} \div \frac{x^2-x-6}{12y^2}$$

$$\frac{x+2}{4y} \times \frac{12y^2}{(x-3)(x+2)}$$

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

$$19) b^2 - 4ac = (-1)^2 - 4 \times 2 \times -1$$

$$= 9 > 0$$

(B) $\frac{1}{2} \times \frac{1}{3} \times \frac{1}{4} \times \frac{1}{5}$
 (C) $\frac{1}{2} \times \frac{1}{3} \times \frac{1}{4} \times \frac{1}{5}$

$$20) BD = 2.5 \text{ cm}$$

$$AD = 3.5 \text{ cm}$$

$$21) \frac{y-y_1}{y_2-y_1} = \frac{x-x_1}{x_2-x_1}$$

$$\frac{y+4}{11+4} = \frac{x+6}{5+6}$$

$15x - 11y + 46 = 0$

22) $P = 4$

$$23) \frac{1}{\sin \theta} - \frac{\sin \theta}{\cos \theta}$$

$$= \frac{1}{\sin \theta \cos \theta} - \frac{\sin \theta}{\cos \theta}$$

$$= \frac{1 - \sin^2 \theta}{\sin \theta \cos \theta} = \frac{\cos^2 \theta}{\sin \theta \cos \theta}$$

$$= \frac{\cos \theta}{\sin \theta}$$

$$= \cot \theta$$

24.

$$P = 250, r = 70, k = 2400$$

$$\text{Friday 25021 4904} = \pi\pi\pi$$

$$= \frac{22}{7} \times 7 \times 25$$

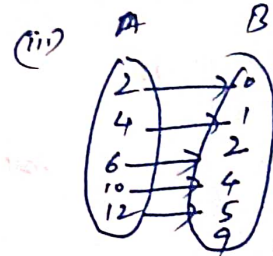
$$= 5500$$

$$\text{செவ்வாரை பிணை} = \frac{550}{4}$$

$$= 137.50$$

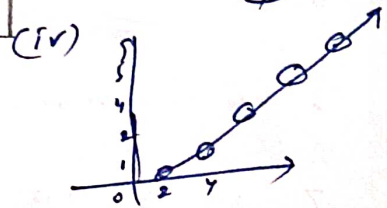
(i)

7	2	4	6	10
for	0	1	2	4
				12
				5



25.

$$V_1 : V_2 = 64 : 343$$



26.

$$25 \times 5 = 62$$

$$\text{செவ்வாரை அளவு} = 0.329$$

30) செவ்வாரை அளவு = 35

27.

$$P(A \cup B) \leq 1$$

$$P(A) + P(B) - P(A \cap B) \leq 1$$

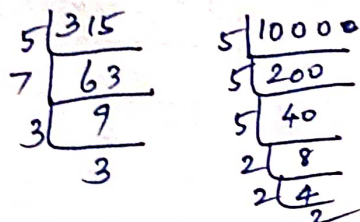
$$0.5 + P(B) - 0.3 \leq 1$$

$$P(B) \leq 1 - 0.2$$

$$P(B) \leq 0.8$$

31) $S_n = \frac{5}{9} \left[\frac{10(10^n - 1)}{10 - 1} - n \right]$

28.



$$P^2 \times 9^1 \times 7^4 \times 5^3 = 315000$$

$$P^2 \times 9^1 \times 7^4 \times 5^3 = 3^2 \times 7^1 \times 5^4 \times 2^3$$

$$\boxed{P=3}, \boxed{9=7}, \boxed{7=5}, \boxed{5=2}$$

32)

$x = 35$
$y = 30$
$z = 25$

33) $AB = \begin{pmatrix} 52 & 30 \\ 43 & 3 \end{pmatrix}$

$$(AB)^T = \begin{pmatrix} 52 & 43 \\ 30 & 3 \end{pmatrix}$$

$$A^T = \begin{pmatrix} 5 & 1 \\ 2 & 2 \\ 9 & 8 \end{pmatrix} \quad B^T = \begin{pmatrix} 1 & 15 \\ 7 & 21 \end{pmatrix}$$

$$B^T A^T = \begin{pmatrix} 52 & 30 \\ 43 & 3 \end{pmatrix}$$

III

29. (i) $f(2) = 0, f(4) = 1, f(6) = 2$
 $f(10) = 5, f(12) = 8$
 (ii) $\{ (2,0), (4,1), (6,2), (10,5) \}$

$$34) \quad x = \frac{pk}{a} \text{---(1)} \quad y = \frac{pk}{b} \text{---(2)}$$

$$\text{(1)+(2)} \Rightarrow x+y = \frac{pk}{a} + \frac{pk}{b}$$

$$p = pk \left(\frac{1}{a} + \frac{1}{b} \right)$$

$$1 = k \left(\frac{a+b}{ab} \right)$$

$$k = \frac{ab}{a+b}$$

35)

இயல் - ①

கூடு - ①

பெருக்கி - ③

} - ⑤

36)

பயிர் தர்ப்பின் கட்டாய = 79 ரூப

37

$$31x + 15y + 30 = 0$$

38)

$$AC = \frac{k}{\sqrt{3}} \text{---(1)}$$

$$AD = k\sqrt{3} \text{---(2)}$$

$$AC + AD = \frac{k}{\sqrt{3}} + k\sqrt{3}$$

$$= \frac{k + k\sqrt{3}\sqrt{3}}{\sqrt{3}}$$

$$= \frac{k + 3k}{\sqrt{3}}$$

$$\text{அமரம்} = \frac{4k}{\sqrt{3}} \text{---(3)}$$

39.

$$\text{தொகு (r)} = 250000$$

$$\text{தொகு (t)} = 350000$$

$$40) \quad \text{அனைத்து தொகு = } 60^\circ$$

$$41) \quad \text{(i)} \quad \frac{6}{36} = \frac{1}{6}$$

$$\text{(ii)} \quad \frac{6}{36} = \frac{1}{6}$$

$$\text{(iii)} \quad \frac{15}{36} = \frac{5}{12}$$

$$\text{(iv)} \quad 0$$

$$42) \quad A = \{0, 1, 2\}$$

$$B = \{2, 3, 4, 5\}$$

$$C = \{3, 5, 7\}$$

$$B \cup C = \{2, 3, 4, 5, 7\}$$

$$A \times (B \cup C) = \{(0, 2), (0, 3), (0, 4),$$

$$(0, 5), (0, 7), (1, 2), (1, 3), (1, 4), (1, 5),$$

$$(1, 7), (2, 2), (2, 3), (2, 4), (2, 5), (2, 7)\}$$

$$A \times B = \{(0, 2), (0, 3), (0, 4), (0, 5),$$

$$(1, 2), (1, 3), (1, 4), (1, 5), (2, 2),$$

$$(2, 3), (2, 4), (2, 5)\}$$

$$A \times C = \{(0, 3), (0, 5), (0, 7), (1, 3), (1, 5),$$

$$(1, 7), (2, 3), (2, 5), (2, 7)\}$$

$$(A \times B) \cup (A \times C) = \{(0, 2), (0, 3), (0, 4), (0, 5),$$

$$(0, 7), (1, 2), (1, 3), (1, 4), (1, 5), (1, 7), (2, 2),$$

$$(2, 3), (2, 4), (2, 5), (2, 7)\} \text{---(1)}$$

$$A \times (B \cup C) = (A \times B) \cup (A \times C)$$

பரிசீலனை.

<p><u>IV</u></p> <p>43) (அ) ஓதாக்கொள்குதல் பகலி $PT = PT' = 10.20.20^{\circ}$</p>	
<p>(ஆ) 25210000 — ② } — ②</p> <p>20000000 — ⑥</p>	
<p>44) (அ) 20000000 கிமீ/மீ = 18.6 050</p>	
<p>(ஆ) பிடிப்பு (-2,7)</p>	

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