

દોરકા-૪
વિષય-ગણિત

14/10/19

DELUXE
PAGE NO.:
DATE.

પ્ર-1 (અ)

[8]

- (1) (બ) 1
- (2) (અ) 2
- (3) (બ) 60°
- (4) (ક) ગંદ ૦.5
- (5) (ક) 1.9
- (6) (અ) 1
- (7) (ક) 105
- (8) (અ) 0

[બ]

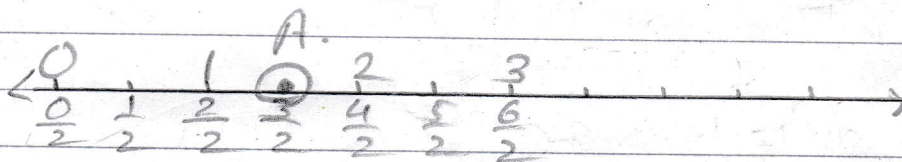
[8]

- (1) 1
- (2) 180°
- (3) 90°
- (4) 2.4 સેમી
- (5) $\frac{3}{6}$ સમતા $\frac{1}{2}$
- (6) 4
- (7) 125
- (8) 2:3

પ્ર-2 (અ)

[ક] [12]

(1) $1\frac{1}{2} = \frac{3}{2}$



(2) $6x - 7 = 5 + 2x$

→ $6x - 2x = 5 + 7$

∴ $4x = 12$

∴ $x = 3$

(3) ગામડેવાળા અને શહેરવાળા વચ્ચે 120 કીમી દુર છે.

- [4] (1) → (d) $(-\frac{3}{5})$
 (2) → (c) $(\frac{5}{3})$
 (3) → (b) $(-\frac{5}{3})$
 (4) → (a) $(\frac{3}{5})$

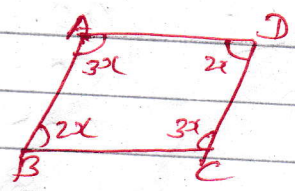
-3 (21)

[21K] 12

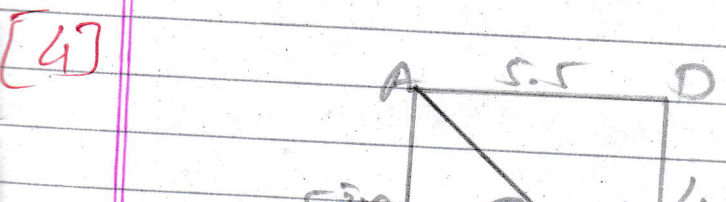
(1) $4(3x-1) = 3(2x-3)$
 → $12x - 4 = 6x - 9$
 ∴ $12x - 6x = -9 + 4$
 ∴ $6x = -5$
 ∴ $x = \frac{-5}{6}$

(2) $\frac{-2}{3} = \frac{-2 \times 2}{3 \times 2} = \frac{-4}{6}$, $\frac{1}{2} = \frac{1 \times 3}{2 \times 3} = \frac{3}{6}$
 → $(\frac{-2}{3})$ और $\frac{1}{2}$ अरबोंकी अंशय अंशय = $\frac{-3}{6}, \frac{-2}{6}, \frac{-1}{6}, 0, \frac{1}{6}, \frac{2}{6}$

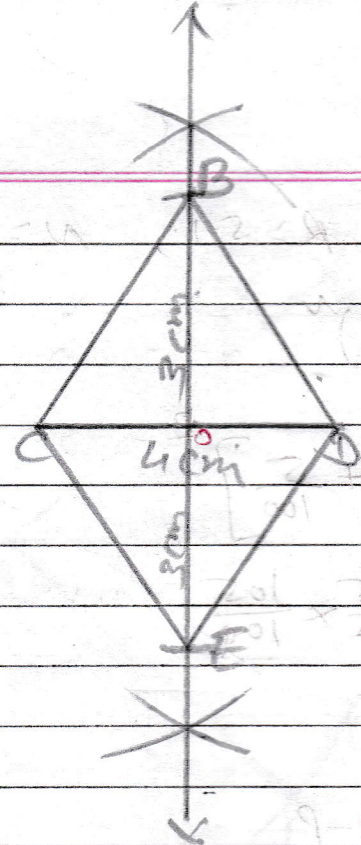
(3) एगो ३, अ.ग.र ABCD में $\angle A = 3x$ है, $\angle B = 2x$ है
 ∴ $m\angle A + m\angle B = 180^\circ$ [∵ अंतरांतरांगी अंशय अंशय]
 $3x + 2x = 180^\circ$
 $5x = 180^\circ$
 $x = 36^\circ$



→ $m\angle A = 3x = 3(36) = 108^\circ$
 $m\angle B = 2x = 2(36) = 72^\circ$
 $m\angle C = 108^\circ$ [∵ $m\angle A = m\angle C$]
 $m\angle D = 72^\circ$ [∵ $m\angle B = m\angle D$]



[4]



- $CD = 4$ सेमी रखो, तो $OB = OE = 4$ सेमी
- CD को लंबविलंब रख लिये, तो केंद्रबिंदु में O मान लीये,
- BC, CE, EB, CB रखो,
- 8 भांजे $\square BCEB$ है,

[6]

[04]

(1) दिया है $2m = 6$ है
 $\therefore m = 3$

→ $m^2 + 1 = (3)^2 + 1 = 9 + 1 = 10$
 $m^2 - 1 = (3)^2 - 1 = 9 - 1 = 8$

→ आम, पायथागोरियम त्रिभुज 6, 8, 10 चले
 $(6)^2 + (8)^2 = (10)^2$

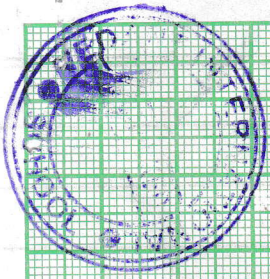
(2) दिया है लंब संख्या 10 है,

तो संख्या 3 गुणा नहीं 10 है 5 गुणा 5 मले है

$3x - 1 = 5$

$\therefore 3x = 6$

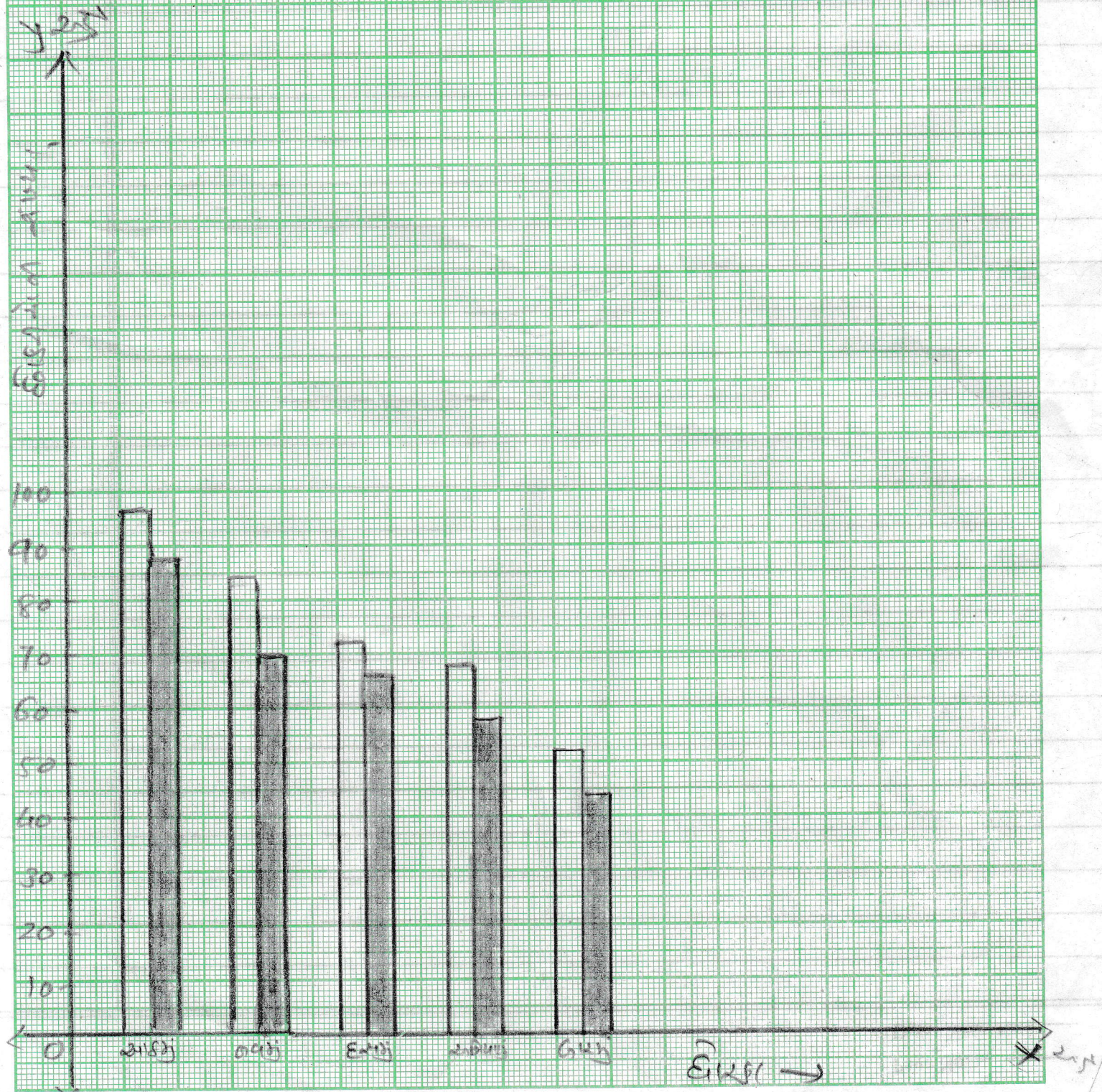
$\therefore x = 2$



1

ಯಾಂತ್ರಿಕ ವಿಜ್ಞಾನ
10 ರಾಜ್ಯ

□ ವಿಜ್ಞಾನ
■ ವಿಜ್ಞಾನ



$$\begin{aligned} \rightarrow \text{૨મ઼ પૂ઼ાણજ મિય} &= 3x = 3(20) = 60' \\ \text{૩મ઼ પૂ઼ાણજ મિય} &= 4x = 4(20) = 80' \\ \text{૪મ઼ પૂ઼ાણજ મિય} &= 5x = 5(20) = 100' \\ \text{૫મ઼ પૂ઼ાણજ મિય} &= 6x = 6(20) = 120' \end{aligned}$$

(4)

$$\text{સંમિતિ} = \frac{1}{6}$$

(5)

$$2 \quad 324$$

$$2 \quad 162$$

$$3 \quad 81$$

$$3 \quad 27$$

$$3 \quad 9$$

$$3 \quad 3$$

$$1$$

$$\begin{aligned} \therefore 324 &= 2 \times 2 \times 3 \times 3 \times 3 \times 3 \\ &= (2)^2 \times (3)^2 \times (3)^2 \end{aligned}$$

$$= (2 \times 3 \times 3)^2$$

$$= (18)^2$$

$$\therefore \sqrt{324} = 18.$$

(6)

$$2 \quad 1000$$

$$2 \quad 500$$

$$2 \quad 250$$

$$5 \quad 125$$

$$5 \quad 25$$

$$5 \quad 5$$

$$1$$

$$\therefore 1000 = 2 \times 2 \times 2 \times 5 \times 5 \times 5$$

$$= (2 \times 5)^3$$

$$= 10^3$$

$$\therefore \sqrt[3]{1000} = 10.$$

(7)

$$x \text{ ા } 12 \cdot 10 = 96$$

$$\therefore \frac{x \times 12}{100} = 96$$

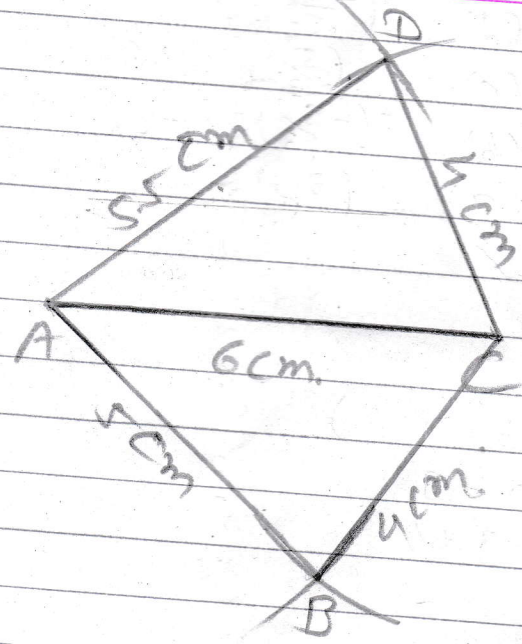
$$\therefore x = \frac{96 \times 100}{12}$$

$$\therefore \boxed{x = 800}$$

(8)

$$P = 4000 \text{ રૂ.}$$

$$\rightarrow \text{સિસ્ટમ } I = \text{PRN } 4000 \times 12 \times 2$$



(5)

वर्ग	आवृत्ति	सिक्का
0 - 10	III	03
10 - 20	II	02
20 - 30	IIII	04
30 - 40	IIII	05
40 - 50	IIII I	06
50 - 60	IIII II	07
60 - 70	III	03
कुल	-	30

[6]

- (1) X
- (2) L
- (3) X
- (4) X

(1) $P = 16,000$, $R = 5\%$, $N = 2$ वर्ष.

→

$$A = P \left(1 + \frac{R}{100}\right)^N$$

$$= 16000 \left[1 + \frac{5}{100}\right]^2$$

$$= 16000 \times \frac{105}{100} \times \frac{105}{100}$$

$$= 17,640$$

→ अर्थात् $I = A - P$

$$= 17640 - 16000$$

$$= 1640$$

(2) 2 882

3 441

3 147

7 49

7 7

1

$$\rightarrow 882 = 2 \times 3 \times 3 \times 7 \times 7$$

अर्थात् 2 की शक्ति 1 है।

मात्र 3 की शक्ति 2 है।

अर्थात् 7 की शक्ति 2 है।

$$\rightarrow 882 + 2 = 3 \times 3 \times 7 \times 7$$

$$\therefore 441 = (3 \times 7)^2$$

$$= (21)^2$$

(3) 2 704

2 352

2 176

2 88

2 44

2 22

11 11

$$\rightarrow 704 = 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 11$$

अर्थात् 11 की शक्ति 1 है।

मात्र 2 की शक्ति 6 है।

अर्थात् 2 की शक्ति 6 है।

$$\rightarrow 704 \div 11 = (2 \times 2)^3$$

(3) દાંડો કે ઝાંઝાં કાંકા = 2x (2)

ઠાઠ કાંકા = 3x ઠાઠ

ઠાઠ કાંકાઠા ઠા ઠઠાઠ = 10

$$1. 2x - 30 = 10$$

$$\therefore \boxed{x = 10}$$

$$\rightarrow \text{ઠાઠ કાંકા} = 2(x) = 2(10) = (20)$$

$$\text{ઠાઠ કાંકા} = 3(x) = 3(10) = (30)$$

y-5 (2)

$$\rightarrow G [10]$$

(2) $P = 20,000$, $R = 10\%$, $N = 3$ ઠાઠ

\rightarrow ઠાઠાઠાઠ (I₁) ઠાઠ,

$$I_1 = \frac{PRN}{100 + R} = \frac{20000 \times 10 \times 3}{100 + 10} = 6000$$

\rightarrow ઠાઠાઠાઠ (I₂) ઠાઠ,

$$A = P \left(1 + \frac{R}{100}\right)^N = 20000 \left[1 + \frac{10}{100}\right]^3$$

$$= \frac{20000 \times 11}{100} \times \frac{11}{100} \times \frac{11}{100}$$

$$= 26,620$$

\rightarrow ઠાઠાઠાઠ (I₂) = $A - P = 26,620 - 20,000$

$$= 6,620$$

\rightarrow ઠાઠાઠાઠ = ઠાઠાઠાઠ - ઠાઠાઠાઠ

$$= 6620 - 6000$$

$$= 620$$

(3) દારૂં સંબંધી સંખ્યાઓ સંબંધિત છે. (2)

કે. સંખ્યા = $x+4$

∴ સંખ્યાઓ $\frac{x}{x+4}$

જો, સંખ્યામાં 1 કિલો સંખ્યા = $x+1$

કે. સંખ્યામાં 3 કિલો સંખ્યા = $3x+4+3 = x+7$ સંખ્યા

$\frac{1}{2}$ ભાગ મળે,

માટે, $\frac{x+1}{x+7} = \frac{1}{2}$

∴ $2(x+1) = x+7$

∴ $2x+2 = x+7$

∴ $x = 5$

→ સંખ્યા સંબંધી સંખ્યાઓ = $\frac{x}{x+4} = \frac{5}{9}$

[6] 6 [06]

(1) DPKRS સંખ્યાઓ છે. તે, તે, $SP = 2R$ અને $SR = PA$ થાય.

∴ $4x = 20$ → $SR = PA$

∴ $x = 5$ ∴ $22 = 3y - 2A$

∴ $3y = 24$

∴ $y = 8$

→ સંખ્યા $x = 5$, $y = 8$ થાય.

(2) ગ્રાહકની કિંમત = 32000 રૂ.

GST = 8%

→ GST ની રકમ = $32000 \times \frac{8}{100}$

= $32000 \times \frac{8}{100}$

= 2560 રૂ.

→ સુધારેલી કિંમત = $32000 + 2560$

= 34560 રૂ.

$$\begin{array}{r} (3) \qquad \qquad \qquad 46 \\ \rightarrow \quad 4 \quad \left| \begin{array}{r} 2119 \\ 16 \\ \hline 519 \\ 516 \\ \hline 3 \end{array} \right. \\ \quad \underline{4} \qquad \qquad \quad \\ \quad 86 \end{array}$$

→ କାରଣ, 2119 ରୁ 3 ଗୁଣି ଟାଣି ତାହା 2116 ହେବ।

$$\therefore 2119 - 3 = 2116$$

$$\therefore \sqrt{2116} = 46$$