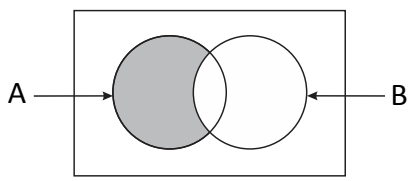
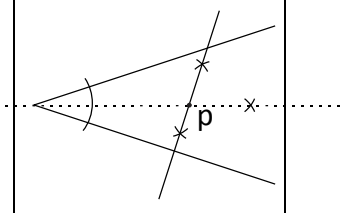
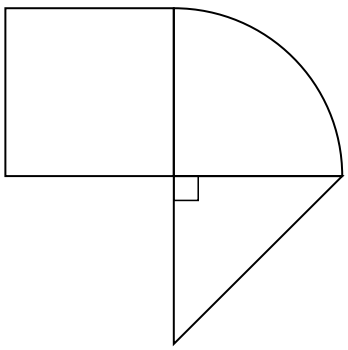
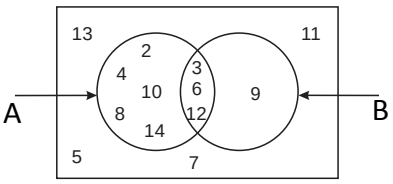
උතුරු මැද පළාත
දෙවන වාර පරීක්ෂණය - 2024 - පිළිතුරු පත්‍රය
ගණිතය - 10 ශ්‍රේණිය
I පත්‍රය I කොටස

01	$10000 \times \frac{10}{100}$ $=$ රු. 1000	1 1	2
02	5.4		2
03	$x = 40^0$		2
04	$\frac{7}{5x} - \frac{5}{5x} = \frac{2}{5x}$	1 1	2
05	$(x-3)(x+2)$		2
06	$= \frac{1}{4} \times 2 \times \frac{22}{7} \times 35$ $= 55\ cm$	1 1	2
07	$64 = 4^3$		2
08	$2x = 70^0$ $x = 35^0$ $PQR = 145^0$	1 1	2
09	$6x^2$		2
10	$35 \times 8 = 280$	1 1	2
11	$30cm^2 \times 20\ cm$ $600\ cm^3$	1 1	2
12	$x = -3$ $x = 2$	1 1	2
13			2
14	$3x = 120^0$ $x = 40^0$	1 1	2

15	$2a + 2b = 4$ $a + b = 2$		2
16	$y = mx - 4$ $2 = 3 \times 3 - 4$ $2 = m$	1 1	2
17	√ √ ×		2
18	$8 \times 12 = 96$ $\frac{96}{4} = 24$ හෝ $24 - 8 = 16$	1 1	2
19	$\frac{2}{6}$		2
20	PQR හා XYZ පා.කෝ.පා	1 1	2
21	$1500 \times \frac{18}{100}$ $=$ රු. 270	1 1	2
22	70^0		2
23	$ACD\ \Delta$		2
24	$1 : 2$		2
25			2

01	(i)	$\frac{1}{6} + \frac{2}{3} = \frac{1}{6} + \frac{4}{6}$	1	
		$= \frac{5}{6}$	1	2
	(ii)	$\frac{1}{6}$	1	1
	(iii)	$= \frac{1}{6} \times \frac{1}{3}$	1	
		$= \frac{1}{18}$	1	2
	(iv)	$\frac{1}{6} \times \frac{2}{3}$	1	
		$\frac{2}{18} = \frac{1}{9}$	1	2
	(v)	$\frac{1}{9} = 48$	1	
		$= 48 \times 9$	1	
		$= 43.2$	1	3
02	(i)	$\frac{1}{4} \times 2 \times \frac{22}{7} \times 14$	1	
		$22\ cm$	1	2
	(ii)	$\frac{1}{4} \times \frac{22}{7} \times 14 \times 14$	1	
		$154\ cm^2$	1	2
	(iii)	$154 : (14 \times 14)$	1	
		$154 : 196$	1	
		$11 : 14$	1	
		$\frac{1}{2} \times 14 \times h = \frac{154}{2}$	1	
		$h = 11$	1	3
	(iv)		1	
			1	
			1	3

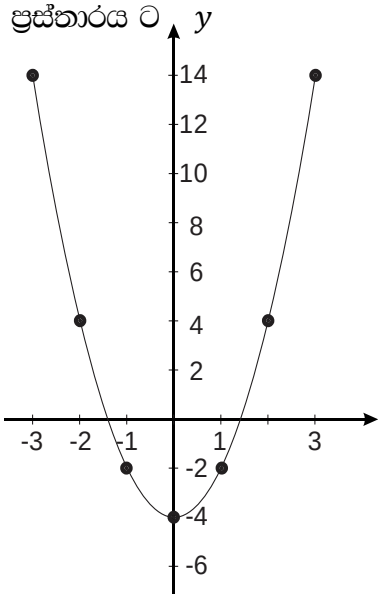
03	(i)	$800\,000 \times \frac{100}{125}$	2	
		$=$ රු. $640\,000$	1	3
	(ii)	$800\,000 \times \frac{17}{100}$	2	
		$136\,000$	1	3
	(iii)	$(136\,000 \times 3) + 800\,000$	1	
		රු. $1208\,000$	1	2
	(iv)	$8 \times 6 = 48$	1	
		$8 \times 3 = 24$	1	
		$48 - 24 = 24$	1	2
04	(i)	$15 \times 3 = 45$		2
	(ii)	$\frac{360^0 - 120}{2} = 120^0$		3
	(iii)	$45 \times 4 = 180$		2
	(iv)	$\frac{60}{150} \times 360^0$	2	
		144^0	1	3
05	(i)	$\varepsilon = \{2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14\}$	1	
		$A = \{2, 4, 6, 8, 10, 12, 14\}$	1	
		$B = \{3, 6, 9, 12\}$	1	3
	(ii)			
	(iii)	$n(A \cap B) = 3$	1	1
	(iv)	$n(A \cup B = n(A) + n(B) - n(A \cap B)$	1	
		$75 = n(A) + 75 - 15$	1	3
		$n(A) = 15$		

උතුරු මැද පළාත

දෙවන වාර පරීක්ෂණය - 2024

ගණිතය - 10 වසර - II කොටස

A කොටස

01	(a)	$= 1500 \times 4$	1	
		$=$ රු. 6000	1	5
		$= \frac{6000}{75000} \times 100\ \%$	2	
		$= 12\ \%$	1	
			1	
	(b)	රු. $500000 \times \frac{4}{100}$	1	
		$=$ රු. 20000	1	
		රු. $400000 \times \frac{8}{100}$	1	5
		$=$ රු. 32 000	1	
		$=$ රු. (20 000 + 32 000)	1	
		$=$ රු. 52 000		10
02	(a)			
	(i)	-4	1	
	(ii)	ප්‍රස්තාරය ට y		
			3	4
	(b)			
	(i)	$(0, -4)$	2	
	(ii)	$-1.4 < x < 1.4$	2	6
	(iii)	-1.4 හා 1.4	2	
				10

03	(a)			
	(i)	$(2x-3)^2 = 4x^2 - 12x + 9$	2	2
	(ii)	$(2x -)\ (x - 4)$	1	
		$2x^2 - 8x - 5x + 20$	1	2
		$2x^2 - 13\,x + 20$		
	(b)			
	(i)	$\frac{1}{x} - \frac{3}{(x+2)}$		
		$\frac{x+2-3x}{x\,(x+2)} = \frac{2-2x}{x\,(x+2)}$	3	3
	(ii)	$\frac{3x-1}{4} = 5$	1	
		$3x - 1 = 20$	1	
		$3x = 21$		
		$x = 7$	1	3
				10
04		$\frac{1}{2} \times x \times (x+2) = 24$	2	
		$x^2 + 2x = 48$	1	
		$x^2 + 2x - 48 = 0$	1	
		$(x+8)\,(x-6) = 0$	2	
		$x = -8$ හෝ $x = -6$	2	10
		දිගක් ($-$) විය නොහැක	1	
		$x > o$		
		$\therefore QR = 6\ cm$	1	

B කොටස

05

(i) $x + 2y = 325$ —— 1 — 2

(ii) (1) × 2 න්

$2x + 4y = 650$ —— (3)

(2) - (3)

$\underline{\underline{x = 175}}$

$x = 175, (1)$ ට ආදේශය

$175 + 2y = 325$

$2y = 250$

$y = 125$

ඇපල් ගෙඩියක මිල = රු.175

නාරං ගෙඩියක මිල = රු.125

(iii) $125\,a + 175\,a = 1200$

$\frac{300\,a}{300} = \frac{1200}{300}$

$a = 4$

2 | 1 | 1 | 2 | 1 | 3 | 10

06

(a)

(i) මිනිත්තු 40 — 1

(ii) වේගය $= 20 \div \frac{40}{60}$

$= 20 \times \frac{60}{40}\ kmh^{-1}$

$= 30\ kmh^{-1}$

මධ්‍යක වේගය $= 120 \div \frac{80}{60}$

$= 120 \times \frac{6}{8} kmh^{-}$

$= 90\ kmh^{-}$ — 3

(b) $72 + \frac{72}{3} = (72 + 24)km$

$= 96\ km$ — 3

10

07

(a)

(i) 4 — 2

(ii) $\lg(\frac{9 \times 20}{x}) = \lg(5 \times x)$

$180 = 5x^2$

$36 = x^2$

(b)

(i) $6 = x$ — 3

$lgr = \lg 12 + \lg 15.3 - lg2.45$

$= 1.0792 + 1.1847 - 0.3892$

(ii) $r = antilog\ 1.8747$

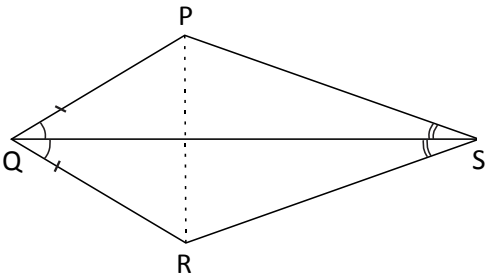
$r = 74.92$

$r =$

10

08

(i)



2

(ii) $PQ = QR$ (දී ඇත)

$P\hat{Q}S = S\hat{Q}R$ (දත්තය)

$QS = QS$ (පොදු පාදය)

$\therefore PSQ\ \Delta \equiv QRS\ \Delta$ (පා.කෝ.පා) — 4

(iii) අංගසම ත්‍රිකෝණවල අනුරූප

අංග සමාන නිසා $P\hat{S}Q = Q\hat{S}R$ — 1

අංග සම ත්‍රිකෝණවල අනුරූප

අංග සමාන නිසා

$PS = RS$ නිසා

$PSR\ \Delta$ ය සමද්විපාද Δ කි. — 3

10

09

(i)

(ii) $PUT = 60^0$ (සම්මුඛ $\sphericalangle$) — 2

(a) $\overset{\Delta}{TQR} = 110 - 60$

(b) $= 50^0$ (සම්මුඛ $\sphericalangle$) — 2

$\overset{\Delta}{SRQ} = 180 - 110$

(c) $= 70^0$ (මිත්‍ර $\sphericalangle$) — 2

$\overset{\Delta}{UPS} = 180 - 130$

(d) $= 50^0$ (මිත්‍ර $\sphericalangle$) — 2

10

10

(a) ප්‍රමේයය සාධනයට — 5

(i) $\overset{\Delta}{ABC} = 110^0$ (අනුරූප $\sphericalangle$) — 2

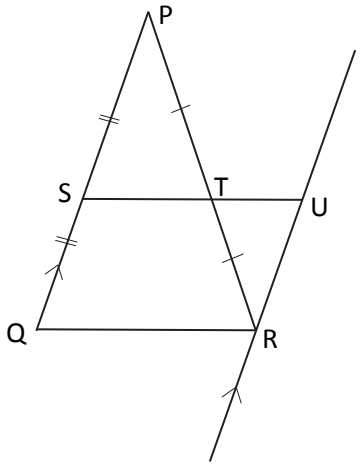
(ii) $\overset{\Delta}{ACB} = 35^0$ (සමද්විපාද Δ) — 2

(iii) $\overset{\Delta}{ACE} = 35^0$ (ඒකාන්තර $\sphericalangle$) — 1

10

11

(i)



(ii) $PT = TR$ (දත්තය)

$PTS = UTR$ (ප්‍රතිමුඛ $\sphericalangle$) — 2

(b) $SPT = TRU$ (ඒකාන්තර $\sphericalangle$)

(i) $PST = TUR$ (ඒකාන්තර $\sphericalangle$)

$\therefore PST\ \Delta \equiv TRU\ \Delta$ (කෝ.කෝ.පා) — 5

(ii) අංගසම Δ වල අනුරූප අංග සමාන නිසා

$PS = UR$ — 1

$PS = SQ$ (දී ඇත) — 1

$\therefore UR = SQ$ වේ. — 1

$SQ\ //\ UR$ (දී ඇත.)

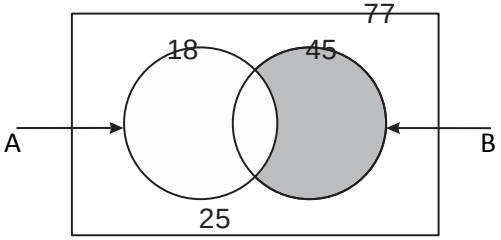
සම්මුඛ පාද යුගලක් සමාන හා සමාන්තර නිසා $QRUS$ සමාන්තරාස්‍රයක් වේ.

10

12

(i) — 1

(ii)



මන්දපෝෂණ ගැහැණු සහිත ළමුන් — 3

(iii) $77 - 25 - 45 = 7$ — 2

(iv) $\frac{43}{77}$ — 2

(v) — 2

10