

Answer key
Standard 8- Set-B

(i) Choose the correct answer

Question no	Tamil medium	English medium
1	இவை அனைத்தும்	All of these.
2	360°	360°
3	28p ⁷	28p ⁷
4	20%	20%
5	20 செ.மீ	20cm.

(ii) Fill in the blanks:

6	-25/39	-25/39
7	π	π
8	1	1
9	52	52
10	செங்கோணமூக்கோணம்.	Right angled triangle.

(iii) True or False

11	தவறு	False
12	தவறு	False
13	சரி	True
14	சரி	True
15	சரி	True

(iv) Match the following

16	πr^2	πr^2 sq. units.
17	-10a	-10a
18	முதல் காற்பகுதி	First quadrant
19	8	8
20	ஆதிப்புள்ளி.	Origin.

Part-B

(v) Answer the following:

21	The decimal form of $13/4$ is 3.25.	$13/4=3.25$
22	To compare rational numbers $3/4$ and $5/6$ we convert them into decimals we get into decimal form respectively 0.75 and 0.83 Thus $3/4 < 5/6$	$3/4$ மற்றும் $5/6$ ஒப்பிடுவதற்கு அதன் தசம வடிவம் முறையே 0.75 மற்றும் 0.83 எனவே $3/4 < 5/6$
23	0.000227	0.000227
24	1	1
25	$F+V-E=4+4-6=2$	$F+V-E=4+4-6=2$
26	$L = \frac{\theta}{360^\circ} \times 2\pi r = 5 \times 2\pi \times 35 = 350\pi \text{ cm}^2.$	$L = \frac{\theta}{360^\circ} \times 2\pi r = 5 \times 2\pi \times 35 = 350\pi \text{ செ.மீ}^2.$
27	$10xy-15x.$	$10xy-15x.$
28	$-3x^2yz^3.$	$-3x^2yz^3.$
29	$X = \frac{450}{600} \times 100 = 75$	$X = \frac{450}{600} \times 100 = 75$
30	$Y = \sqrt{(34^2-30^2)} = \sqrt{256} = 16.$	$Y = \sqrt{(34^2-30^2)} = \sqrt{256} = 16.$

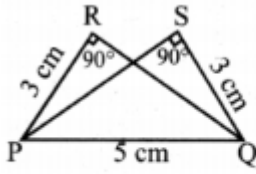
31	Principal (P) = ₹ 3200 r = 2.5% p.a n = 2 years comp. annually \therefore Amount (A) = $\left(1 + \frac{r}{100}\right)^n$ = $3200 \left(1 + \frac{25}{100}\right)^2$ = $3200 \times (1.025)^2 = 3362$ Compound interest (CI) = Amount – Principal = $3362 - 3200 = 162$	அசல் (P) = ₹ 3200 r = 2.5% p.a n = 2 \therefore தொகை (A) = $\left(1 + \frac{r}{100}\right)^n$ = $3200 \left(1 + \frac{25}{100}\right)^2$ = $3200 \times (1.025)^2 = 3362$ CI = A-P = $3362 - 3200 = 162$
32	$X+50^\circ+80^\circ=180^\circ$ $X=50^\circ$.	$X+50^\circ+80^\circ=180^\circ$ $X=50^\circ$.
33	20.	20.
34	$203^2 = 41209$.	$203^2 = 41209$.

Part-C

35	LCM of 10,5,4 and 20 is 20. $\begin{array}{r l} 5 & 10, 5, 4, 20 \\ 3 & 2, 1, 4, 4 \\ 2 & 1, 1, 2, 2 \\ & 1, 1, 1, 1 \end{array}$ $\frac{-17}{10} = \frac{-17 \times 2}{10 \times 2} = \frac{-34}{20}$ $\frac{-7}{5} = \frac{-7 \times 4}{5 \times 4} = \frac{-28}{20}$ $\frac{-2}{4} = \frac{-2 \times 5}{4 \times 5} = \frac{-10}{20}$ $\frac{-19}{20} = \frac{-19}{20}$ <p>Negative numbers are less than zero. \therefore Arranging the numerators we get $-34 < -28 < -19 < -10 < 0$ $\therefore \frac{-34}{20} < \frac{-28}{20} < \frac{-19}{20} < \frac{-10}{20} < 0$ Ascending order = $\frac{-17}{10} < \frac{-7}{5} < \frac{-19}{20} < \frac{-2}{4} < 0$ Descending order $0 > \frac{-2}{4} > \frac{-19}{20} > \frac{-7}{5} > \frac{-17}{10}$</p>	$\begin{array}{r l} 5 & 10, 5, 4, 20 \\ 3 & 2, 1, 4, 4 \\ 2 & 1, 1, 2, 2 \\ & 1, 1, 1, 1 \end{array}$ $\frac{-17}{10} = \frac{-17 \times 2}{10 \times 2} = \frac{-34}{20}$ $\frac{-7}{5} = \frac{-7 \times 4}{5 \times 4} = \frac{-28}{20}$ $\frac{-2}{4} = \frac{-2 \times 5}{4 \times 5} = \frac{-10}{20}$ $\frac{-19}{20} = \frac{-19}{20}$ <p>ஏறு வரிசையில் $-34 < -28 < -19 < -10 < 0$ $\therefore \frac{-34}{20} < \frac{-28}{20} < \frac{-19}{20} < \frac{-10}{20} < 0$ ஏறு வரிசையில் = $\frac{-17}{10} < \frac{-7}{5} < \frac{-19}{20} < \frac{-2}{4} < 0$ இறங்குவரிசையில் $0 > \frac{-2}{4} > \frac{-19}{20} > \frac{-7}{5} > \frac{-17}{10}$</p>
36)	Cube root of $24 \times 36 \times 80 \times 25$ = $3 \times 2 \times 2 \times 2 \times 5$ = 120.	36) கன மூலம் = $24 \times 36 \times 80 \times 25$ = $3 \times 2 \times 2 \times 2 \times 5$ = 120.
37)	Area of the figure = Area of the semicircle of radius 3 cm + 2 (Area of triangle with b = 9 cm and h = 3 cm) = $\left(\frac{1}{2}\pi r^2\right) + \left(2 \times \frac{1}{2}bh\right)$ sq. units = $\frac{1}{2} \times 3.14 \times 3 \times 3 + (2 \times \frac{1}{2} \times 9 \times 3)$ cm ² = $\frac{28.26}{2} + 27$ cm ² = $14.13 + 27$ cm ² = 41.13 cm ² \therefore Area of the figure = 41.13 cm ² (approximately)	$= \left(\frac{1}{2}\pi r^2\right) + \left(2 \times \frac{1}{2}bh\right)$ $= \frac{1}{2} \times 3.14 \times 3 \times 3 + (2 \times \frac{1}{2} \times 9 \times 3)$ $= \frac{28.26}{2} + 27$ cm ² = $14.13 + 27$ cm ² = 41.13 செ.மீ ²

<p>38) — — Product is $-6x^5y^4z^3$</p>	$-6x^5y^4z^3$
<p>39) $\frac{5}{6}y - 3xy + 1$.</p>	$\frac{5}{6}y - 3xy + 1$
<p>40)</p> <p>Total C.P of the washing machine = C.P + Overhead Expenses = 16150 + 1350 = ₹17500 S.P = ₹19250</p> <p>Here, S.P > C.P. Hence, there is a gain.</p> $\text{Gain \%} = \left(\frac{\text{Gain}}{\text{C.P}} \times 100 \right) \% = \left(\frac{19250 - 17500}{17500} \times 100 \right) \%$ $= \left(\frac{1750}{17500} \times 100 \right) \% = 10\%$	<p>துணி துவைக்கும் இயந்திரத்தின் மொத்த அடக்க விலை = அடக்க விலை + இதரச் செலவுகள் = 16150 + 1350 = ₹17500</p> <p>விற்பனை விலை = ₹19250</p> <p>இங்கு, விற்பனை விலை > அடக்க விலை ஆகும். ஆகவே, இங்கு இலாபம் ஏற்படுகிறது.</p> $\text{இலாபம் \%} = \left(\frac{\text{இலாபம்}}{\text{அ.வி}} \times 100 \right) \% = \left(\frac{19250 - 17500}{17500} \times 100 \right) \% = \left(\frac{1750}{17500} \times 100 \right) \% = 10\%$
<p>41)</p> <p>Radius, $r = 7.5 \text{ cm}$ and $n = 6$.</p> <p>Area of each of the sectors, $A = \frac{1}{n} \times \pi r^2 \text{ sq. units}$</p> $= \frac{1}{6} \times \pi \times 7.5 \times 7.5$ $= 9.375\pi \text{ sq. cm}$	<p>ஆரம், $r = 7.5$ செமீ மற்றும் $n = 6$.</p> <p>வட்டக்கோணப் பகுதியின் பரப்பளவு, $A = \frac{1}{n} \times \pi r^2$</p> $= \frac{1}{6} \times \pi \times 7.5 \times 7.5$ $= 9.375\pi \text{ செமீ}^2$
<p>42)</p> <p>Diff between CI and SI = $P \left(\frac{r}{100} \right)^2$</p> $20 = 8000 \left(\frac{r}{100} \right)^2$ $\left(\frac{20}{8000} \right) = \left(\frac{r}{100} \right)^2$ $\left(\frac{r}{100} \right)^2 = \frac{1}{400} = \left(\frac{1}{20} \right)^2$ $\frac{r}{100} = \frac{1}{20}$ $r = \frac{100}{20} \quad \boxed{r = 5\%}$	<p>2 ஆண்டுகளுக்கு, C.I - S.I = $P \left(\frac{r}{100} \right)^2$</p> $20 = 8000 \left(\frac{r}{100} \right)^2$ $r^2 = 25$ $r = 5\%$

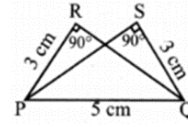
43)



Answer:

In ΔPRQ and ΔPSQ $\angle PRQ = \angle PSQ = 90^\circ$ given $PR = QS = 3$ cm given $PQ = PQ = 5$ cm common

It satisfies RHS criteria

 $\therefore \Delta PRQ$ congruent to ΔQSP . ΔPRQ & ΔPSQ $\angle PRQ = \angle PSQ = 90^\circ$ கொடுக்கப்பட்ட தரவு $PR = QS = 3$ cm $PQ = PQ = 5$ cm

தேற்றம் SAS-ன் படி

 $\therefore \Delta PRQ \cong \Delta QSP$.44) $\angle z + 140^\circ = 180^\circ$ Clearly $\angle z = 40^\circ$.In triangle ABC $70^\circ + z^\circ + y^\circ = 180^\circ$ Thus $y = 70^\circ$ and $x = 70^\circ$ $\angle z + 140^\circ = 180^\circ$ ஆகையால் $\angle z = 40^\circ$.முக்கோணம் ABC -ல் $70^\circ + z^\circ + y^\circ = 180^\circ$ எனவே $y = 70^\circ$ மற்றும் $x = 70^\circ$

45)



(Any related answer is acceptable).



46)

$$\begin{array}{r} 42 \\ 4 \overline{) 1764} \\ \underline{16} \\ 164 \\ \underline{164} \\ 0 \end{array}$$

$\sqrt{1764} = 42$

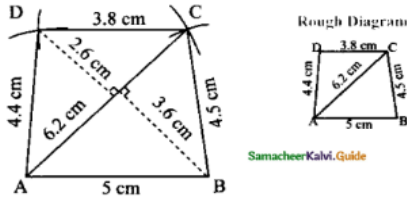
$$\begin{array}{r} 42 \\ 4 \overline{) 1764} \\ \underline{16} \\ 164 \\ \underline{164} \\ 0 \end{array}$$

$\sqrt{1764} = 42$

Part-D

47) a

Given ABCD, AB = 5 cm, BC = 4.5 cm, CD = 3.8 cm, DA = 4.4 cm and AC = 6.2 cm



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Steps:

- Draw a line segment AB = 5 cm
- With A and B as centers drawn arcs of radii 6.2 cm and 4.5cm respectively. **let them cut at C.**
- Joined AC and BC.
- With A and C as centres drawn arcs of radii 4.4cm and 3.8 cm respectively. **Let them cut at D**
- Joined AD and CD.
- ABCD is the required quadrilateral.

Calculation of Area:

$$\text{Area of the quadrilateral ABCD} = \frac{1}{2} \times d \times (h_1 + h_2) \text{ sq. units}$$

$$= \frac{1}{2} \times 6.2 \times (2.6 + 3.6) \text{ cm}^2 = 3.1 \times 6.2 = 19.22 \text{ cm}^2$$

47)b

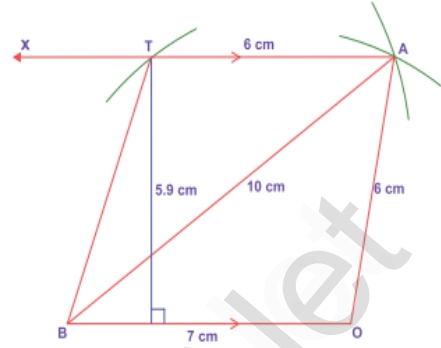


Fig. 5.45

Steps:

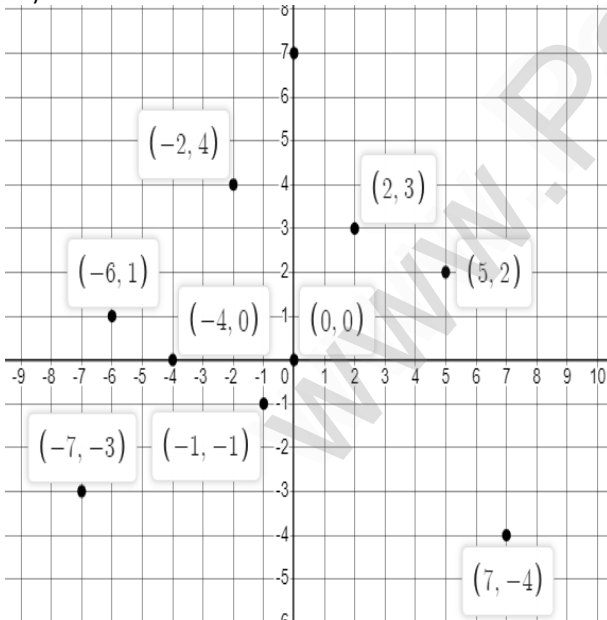
1. Draw a line segment BO = 7 cm.
2. With B and O as centres, draw arcs of radii 10 cm and 6 cm respectively and let them cut at A.
3. Join BA and OA.
4. Draw AX parallel to BO
5. With A as centre, draw an arc of radius 6 cm cutting AX at T.
6. Join BT. **BOAT** is the required trapezium.

Calculation of Area:

$$\text{Area of the trapezium BOAT} = \frac{1}{2} \times h \times (a + b) \text{ sq units}$$

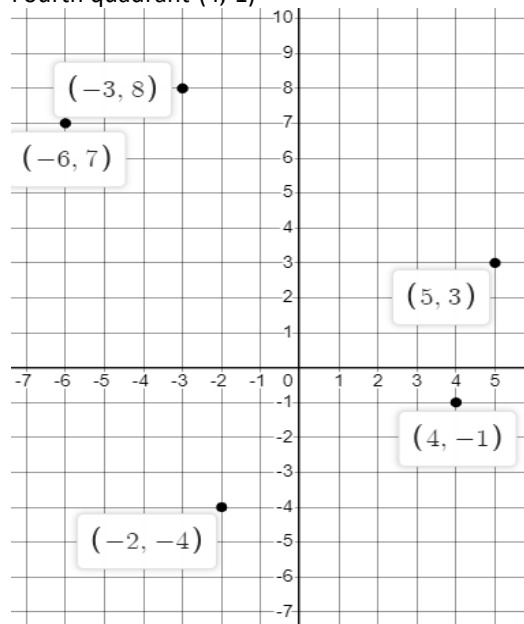
$$= \frac{1}{2} \times 5.9 \times (7 + 6) = 38.35 \text{ sq.cm}$$

48)a



48)B

- First quadrant-(5,3)
- Second quadrant-(-6,7),(-3,8)
- Third quadrant-(-2,-4)
- Fourth quadrant-(4,-1)



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