

CLASS: 8th

SA-1

SUBJECT: MATHS

MARKS: 80

PRINCIPLES OF VALUATION

SECTION - A

20 x 1 = 20 MARKS:

- | | | | | |
|-------|-----------|-------|-------|-------|
| 1. B | 2. D | 3. A | 4. A | 5. |
| 6. B | 7. A | 8. A | 9. A | 10. B |
| 11. D | 12. | 13. B | 14. B | 15. B |
| 16. B | 17. A & B | 18. B | 19. A | 20. C |

SECTION - B

4 x 2 = 8 MARKS

21 Ans:

Sum of exterior angles of a Regular polygon = 360°

No. of exterior angles of a Regular octagon = 8.

The measure of each exterior angles of

$$\text{a regular octagon} = \frac{360^\circ}{8} = 45^\circ$$

22

Ans: Multiplicative Commutative

(i) Ans: Multiplicative inverse.

23 Ans:

$$3(x+1) = 2(x-1)$$

Sreenu

$$\text{If } x = 5$$

$$3(5+1) = 2(5-1)$$

$$3(6) = 2(4)$$

$$18 = 8$$

Durga

$$\text{If } x = -5$$

$$3(-5+1) = 2(-5-1)$$

$$3(-4) = 2(-6)$$

24. Ans: 1) $49 - 1 = 48$

2) $48 - 3 = 45$

3) $45 - 5 = 40$

4) $40 - 7 = 33$

5) $33 - 9 = 24$

6) $24 - 11 = 13$

7) $13 - 13 = 0$

$\sqrt{49} = 7.$

SECTION - C

$5 \times 4 = 20$ MARKS

25 Ans: $\left(\frac{4}{5}\right) + \left(\frac{-7}{3}\right) + \left(\frac{-9}{11}\right) + \left(\frac{11}{2}\right)$

$= \frac{4}{5} - \frac{7}{3} - \frac{9}{11} + \frac{11}{2}$

$= \frac{264 - 770 - 270 + 1815}{330}$

$= \frac{2079 - 1040}{330}$

$= \frac{1039}{330}$

26 Ans:

$\frac{x}{2} + \frac{x}{3} + \frac{x}{4} = 13$

$\frac{6x + 4x + 3x}{12} = 13$

$\frac{13x}{12} = 13$

$13x = 13 \times 12$

$x = \frac{13 \times 12}{13}$

$\therefore x = 12$

Verification:

If $x = 12$

$= \frac{12}{2} + \frac{12}{3} + \frac{12}{4}$

$= 6 + 4 + 3$

$= 13$

$LHS = RHS$

Ans: $\begin{array}{r} 2 \overline{) 175616} \\ 2 \overline{) 87808} \\ 2 \overline{) 43904} \\ 2 \overline{) 21952} \\ 2 \overline{) 10976} \\ 2 \overline{) 5488} \\ 2 \overline{) 2744} \\ 2 \overline{) 1372} \\ 2 \overline{) 686} \\ 7 \overline{) 343} \\ 7 \overline{) 49} \\ 7 \overline{) 7} \\ 1 \end{array}$

$$175616 = \overline{2 \times 2 \times 2} \times \overline{2 \times 2 \times 2} \times \overline{2 \times 2 \times 2} \times \overline{7 \times 7 \times 7}$$

$$\sqrt[3]{175616} = 2 \times 2 \times 7$$

$$\therefore \sqrt[3]{175616} = 28.$$

28 Ans) $P = ₹ 20,000, R = 5\%, n = 2$

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

$$= 20000 \left(1 + \frac{5}{100} \right)^2$$

$$= 20000 \left(1 + \frac{1}{20} \right)^2$$

$$= 20000 \left(\frac{21}{20} \right)^2$$

$$= \frac{50}{100} \times \frac{441}{400}$$

$$= ₹ 22,050$$

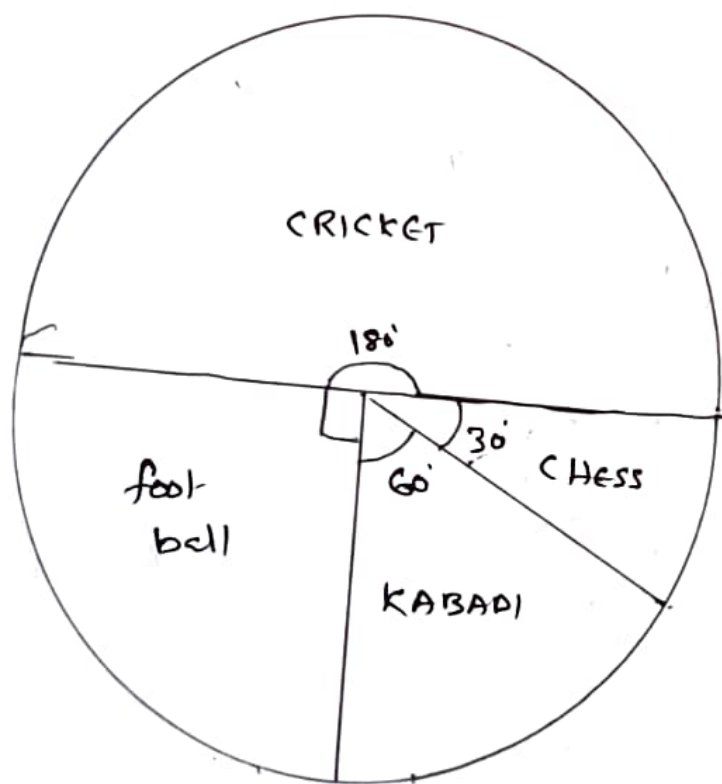
$$(ii) C.I = A - P$$

$$= 22050 - 20000$$

$$= ₹ 2050$$

29 Ans:

Game	No. of students	central angle
CRICKET	18	$\frac{18}{36} \times 360^\circ = 180^\circ$
FOOTBALL	9	$\frac{9}{36} \times 360^\circ = 90^\circ$
KABADI	6	$\frac{6}{36} \times 360^\circ = 60^\circ$
CHESS	3	$\frac{3}{36} \times 360^\circ = 30^\circ$
TOTAL	36	



SECTION - D

4 × 8 = 32 Marks

Q. Ans: $\sqrt{7921}$

$$\begin{array}{r|l} 8 & \overline{7921} \\ \hline 8 & 64 \\ \hline 169 & 1521 \\ & 1521 \\ \hline & 0 \end{array} \quad \begin{array}{l} 89 \\ \\ \end{array}$$

$$\sqrt{7921} = 89$$

(i) Ans)

$$\begin{array}{r|l} 2 & 6480 \\ \hline 2 & 3240 \\ \hline 2 & 1620 \\ \hline 2 & 810 \\ \hline 5 & 405 \\ \hline 3 & 81 \\ \hline 3 & 27 \\ \hline 3 & 9 \\ \hline 3 & 3 \\ \hline & 1 \end{array}$$

$$6480 = \overline{2 \times 2 \times 2 \times 2} \times 5 \times \overline{3 \times 3 \times 3 \times 3}$$

5 is the least number divided 6480 to get a perfect square.

$$\therefore \sqrt{1296} = 36$$

(OR)

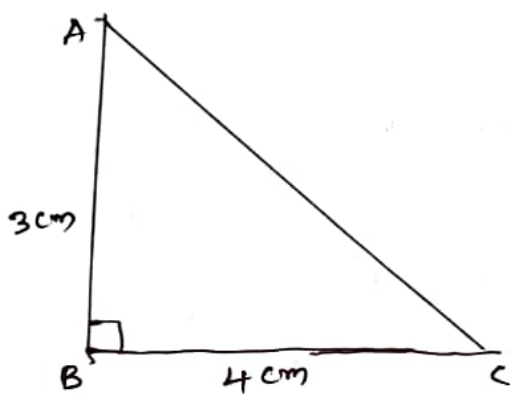
30 b i Ans

$$\text{Area of a square} = 961 \text{ m}^2$$

$$\text{side of a square} = \sqrt{961} = 31 \text{ m}$$

$$\therefore \text{Side of a square} = 31 \text{ m}$$

ii Ans



Given that $\angle B = 90^\circ$

$$AB = 3 \text{ cm} \quad \& \quad BC = 4 \text{ cm.}$$

$$AC^2 = AB^2 + BC^2$$

$$AC^2 = 3^2 + 4^2$$

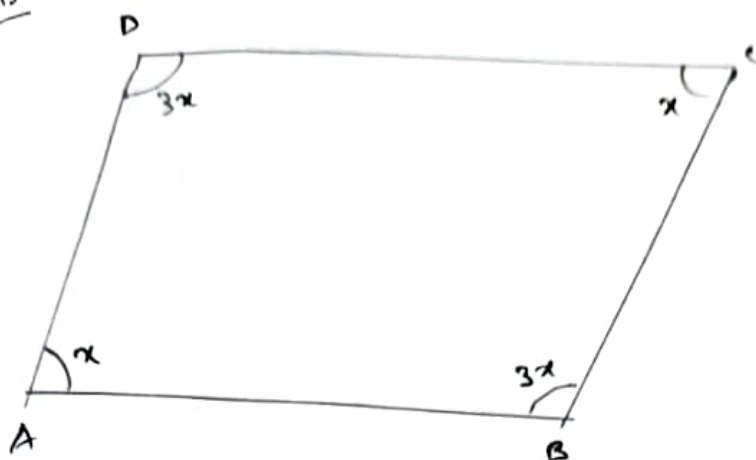
$$AC^2 = 9 + 16$$

$$AC^2 = 25$$

$$AC = \sqrt{25}$$

$$\therefore AC = 5 \text{ cm}$$

Ans:



In a parallelogram sum of adjacent angles is 180°

$$\therefore \angle A + \angle B = 180^\circ$$

$$x + 3x = 180^\circ$$

$$4x = 180^\circ$$

$$x = \frac{180}{4}$$

$$\therefore x = 45^\circ$$

$$\angle A = x = 45^\circ$$

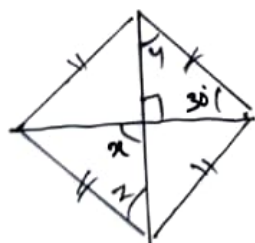
$$\angle B = 3x = 3 \times 45 = 135^\circ$$

$$\angle C = x = 45^\circ$$

$$\angle D = 3x = 135^\circ$$

(OR)

b Ans:



$$\boxed{\angle x = 90^\circ} \because \text{Opposite vertex angles}$$

$$\angle y + 90^\circ + 30^\circ = 180^\circ$$

$$\angle y = 120^\circ = 180^\circ, \boxed{\angle y = 60^\circ}$$

$$\boxed{\angle z = 60^\circ}$$

(Alternate angles)

ii Ans:

$$\boxed{\angle y = 112^\circ}$$

(Opposite angles in a

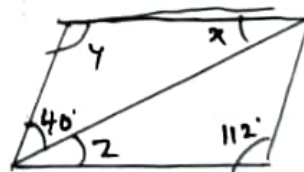
$$\angle y + 40^\circ + \angle z = 180^\circ$$

$$112^\circ + 40^\circ + \angle z = 180^\circ$$

$$152^\circ + \angle z = 180^\circ$$

$$\angle z = 180^\circ - 152^\circ$$

$$\boxed{\angle z = 28^\circ}$$



Parallelogram is equi

$$\angle x = 40^\circ + \angle z$$

$$\angle x = 40^\circ + 28^\circ$$

$$\boxed{\angle x = 68^\circ}$$

32 a i Ans: Weight of alloy = $12\frac{1}{2} \text{ kg} = \frac{25}{2} \text{ kg}$

Given ratio = 1:4

Sum of ratio = $1+4=5$

Weight of copper = $\frac{1}{5} \times \frac{25}{2} = 10 \text{ kg}$

ii Ans:

Market price = ₹ 15,000

Available price = ₹ 14,400

Discount = ₹ 600

Discount percentage = $\frac{600}{15000} \times 100$

∴ Discount percentage = 4%

(OR)

b Ans:

Cost of each Jean = 1450

Cost for pair of jeans = $2 \times 1450 = ₹ 2900$

Cost for one shirt = ₹ 850

Total amount = pair of jeans + one shirt

= 2900 + 850

= 3750

GSR INFO - www.gsrmaths.in

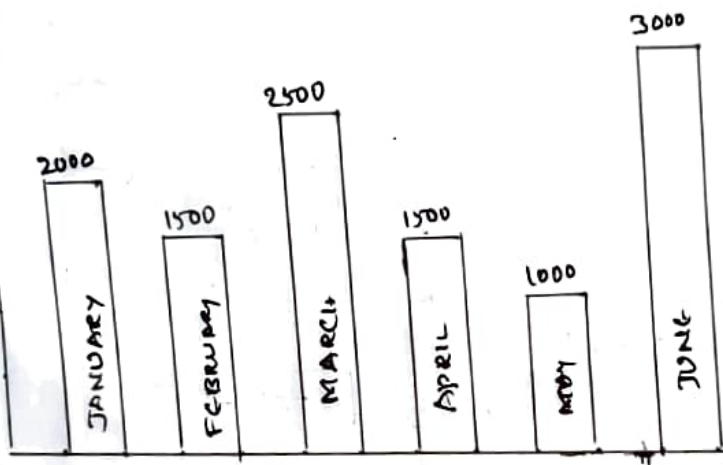
Discount % = 20%

Discount = $3750 \times \frac{20}{100} = ₹ 750$

Amount to be paid = 3750 - 750

= ₹ 3000

327
338
Am)



33 B
Dny

□ → male
▨ → female

people
100
90
80
70
60
50
40
30
20
10
0



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K. R. Raghav
Head Master
Z. P. P. HIGH SCHOOL
KALLACHERUVU
K. Kota (M), Eturu Dist.