

Q.1 Encircle correct answer. Choose only one option for each statement.

[/10]

i. In an ordered pair (a,b), a is known as:

- A. X-axis
- B. Y-axis
- C. Y-coordinate
- D. X- coordinate

ii. $51u \div 17 =$

- A. $+7u$
- B. $3u$
- C. $-3u$
- D. 17

iii. Variables have different values while the constant has _____ value.

- A. unlike
- B. similar
- C. fixed
- D. special

iv. $7:5 = \underline{\quad} : 10$

- A. 2
- B. 17
- C. 14
- D. 35

v. 11.2 expressed in percentage = _____

- A. 1120%
- B. 112%
- C. 1.12%
- D. 0.112%

vi. 75% of \$40 is = _____

- A. \$20
- B. \$10
- C. \$30
- D. \$60

vii. 1m = _____ cm.

- A. 10
- B. 100
- C. 1000
- D. 10000

viii. Supplementary angle of 45° is _____.

- A. 45°
- B. 135°
- C. 225°
- D. 315°

ix. $-2 \times (-8k) =$ _____.

- A. $16k$
- B. $-16k$
- C. $16k^2$
- D. $8k^2$

x. Cube has _____ equal dimensions.

- A. 1
- B. 3
- C. 6
- D. 9

Q.2 Fill in the blanks.

[/10]

- a. The decimal form of 50% is _____.
- b. $\frac{3}{5} =$ _____ %.
- c. In a Cartesian plane, there are two axis known as _____ and _____.
- d. The sum of adjacent angles on a line is equal to _____.
- e. Vertically opposite angles are formed when two straight lines _____ each other.
- f. Convert 9:42 am to 24-hour clock: _____ hours.
- g. Complementary angle of $45^\circ =$ _____.
- h. 205 meters = _____ centimeters.
- i. $7b + 5b + 5 =$ _____.
- j. 25 cents : 80 cents = _____.

Q.3

[10]

a. State whether each of the following statement is true or false.

[/5]

- i. In $4a^2$, 2 is the co-efficient of a. _____
- ii. Y-axis is horizontal axis. _____
- iii. Value of $2a + 3b = 38$ when $a=3$ and $b= 10$ _____
- iv. Divide $3k$ by $7t = \frac{3k}{7t}$ _____
- v. Perimeter is the sum of all equal sides only. _____

b. Match the column A with column B and write your answers in column C.

[/5]

Column A	Column B	Column C
1. $3[3y - 2(y-4)]$ <i>c</i>	a. $2p - 6m$	1. _____
2. $2(3p + 5m)$ <i>c</i>	b. $2p + 6m$	2. _____
3. $2p + 3(2m)$ <i>b</i>	c. $6p + 10m$	3. _____
4. $2[4p - 3(m+p)]$ <i>a</i>	d. $9y$	4. _____
5. $3y + 8y - 2y$ <i>d</i>	e. $3y + 24$	5. _____

Q.4 Do as directed.

[10]

a. Express the given ratio in simplest form.

[/2]

$$1.2 : 2 : 2.8$$

b. If $a : b = 11 : 8$ and $b : c = 6 : 7$, find $a : b : c$.

[/3]

$$a : b : c$$

$$11 : 8$$

$$6 : 7$$

$$66 : 48 : 56$$

$$33 : 24 : 28$$

c. Express 1kg 250g as a ratio of 3kg.

[/2]

$$1250 : 3000$$

d. The ratio of the number of girls to the number of boys in a choir is 4 : 5.

If there are 30 boys in the choir, how many members are there altogether?

[/3]

[10]

Q.5 Solve:

[1]

a. $-11c + 99$

$$= \frac{-11c}{11} = \frac{-c}{1}$$

b. $2a \times 5\frac{1}{5}b$

[1]

$$= 2a \times \frac{26}{5}b$$

c. Simplify

$$12xy - 13xz + 5yz - 4xz$$

[2]

$$= 12xy - 13xz - 4xz + 5yz$$

$$= 12xy - 17xz + 5yz$$

d. Subtract $8a - 3b + 5c - 2d$ from $10a - b - 4c - 6d$

[3]

$$10a - b - 4c - 6d$$

$$8a - 3b + 5c - 2d$$

$$\begin{array}{r} 10a - b - 4c - 6d \\ - \quad 8a - 3b + 5c - 2d \\ \hline 2a + 2b - 9c - 4d \end{array}$$

e. If $a = 3, b = 2, c = -1$, find the value of $(2a + b - c)(4b - 3c)$

[3]

$$= [2(3) + (2) - (-1)] [4(2) - 3(-1)]$$

$$= (6 + 2 + 1)(8 + 3)$$

$$= (9)(11)$$

99

Section B

Marks : 50

Q.6

[10]

- a. A school has 1500 students.

On a particular day, 3% of them were late for school.

Find the number of students who were late for school?

[/2]

$$\frac{3}{100} \times 1500$$
$$= 45$$

- b. 10.8% of the 500 oranges are spoiled.

Calculate the number of oranges that are not spoiled.

[/3]

$$10.8$$

- c. A baker makes 18 cakes in a 12 hour day.

How many does she make in 60 hour week?

[/2]

- d. 10 tourists pay \$117 for 3 nights-stays at a hotel.

How much did each tourist pay for a 1 night stay?

[/3]

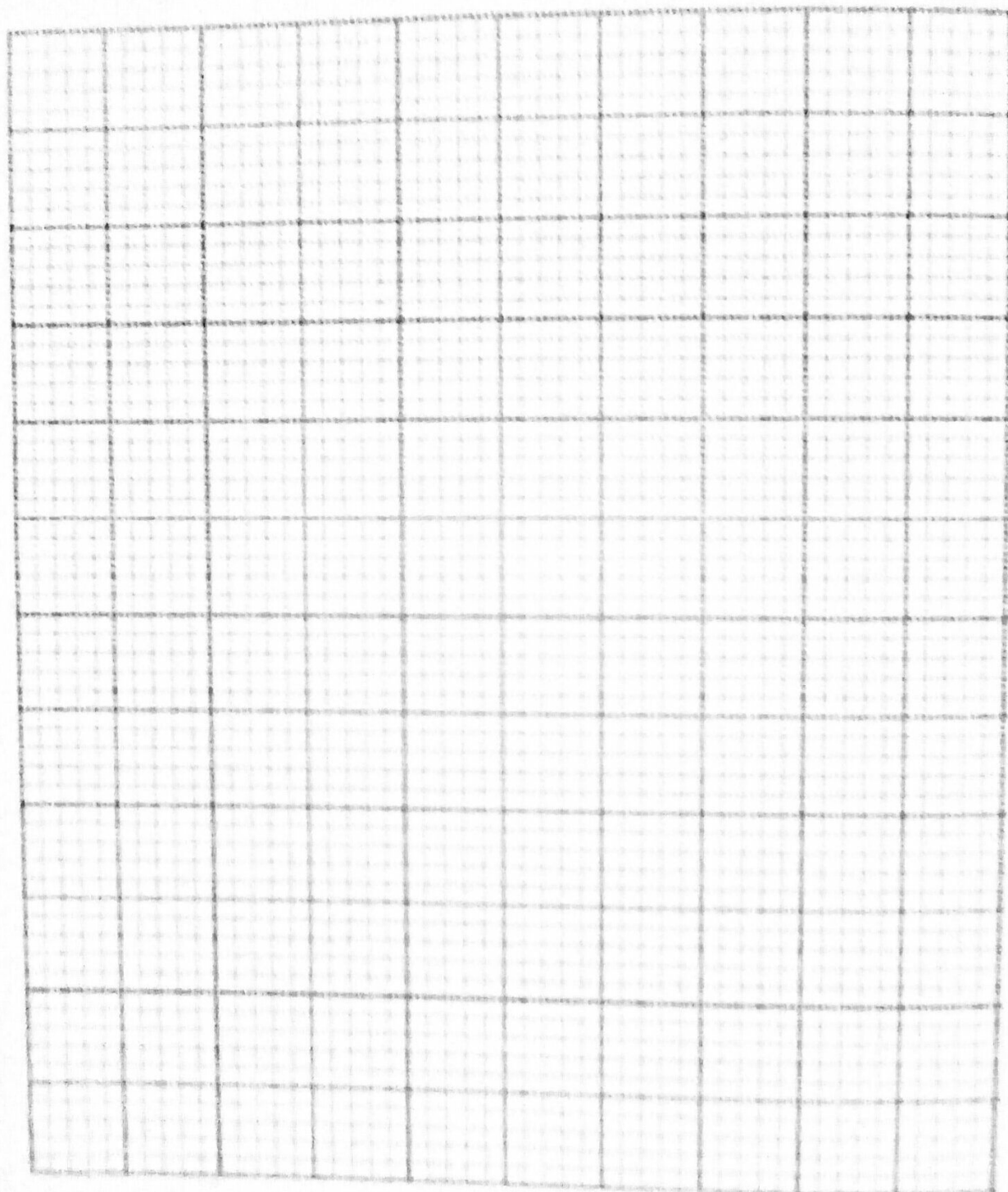
Q.7

(10)

a. Plot the following points on the graph paper.

[/3]

A (-3, -1), B (-2, 0), C (-1, 1), D (0, 2), E (1, 3), F (2, 4), G (3, 5)



b. Draw a line through all the points on the graph paper above and name the shape. [1]

c. A journey starting at 08 40 takes $4 \frac{3}{4}$ hours.

Find the time the journey ends.

[/2]

d. Hamid travel by plane from London to Bangkok.

When it is 04 00 local time in London it is 10 00 local time in Bangkok.

If he leaves London at 21 50 local time what is the local time in Bangkok when he departed?

[/2]

e. A bottle contains 2.5 liters of milk.

Mrs. Ali used some milk to make a sweet dish and 280ml of milk was left.

How many milliliters of milk did she use to make the sweet dish?

[/2]

Q.8

[10]

a. What is the height of cuboid, when $w = 18\text{cm}$ and $l = 24\text{cm}$ and $V = 2160\text{ cm}^3$?

[3]

$$h = \frac{V}{l \times w}$$
$$h = \frac{2160\text{ cm}^3}{24\text{ cm} \times 18\text{ cm}}$$
$$h = 5\text{ cm}$$

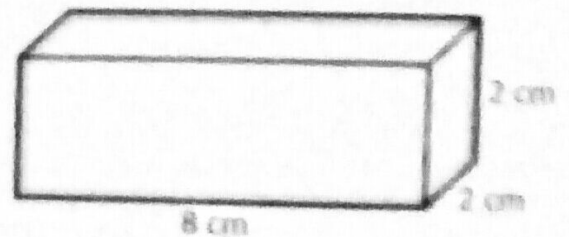
b. The Volume of a cube is 216 cm^3 . Calculate the length of each side.

[3]

c. A solid wooden block is shown in the diagram below along with its dimensions.

Use the dimensions to find the volume and surface area of the block.

[4]



Q.9

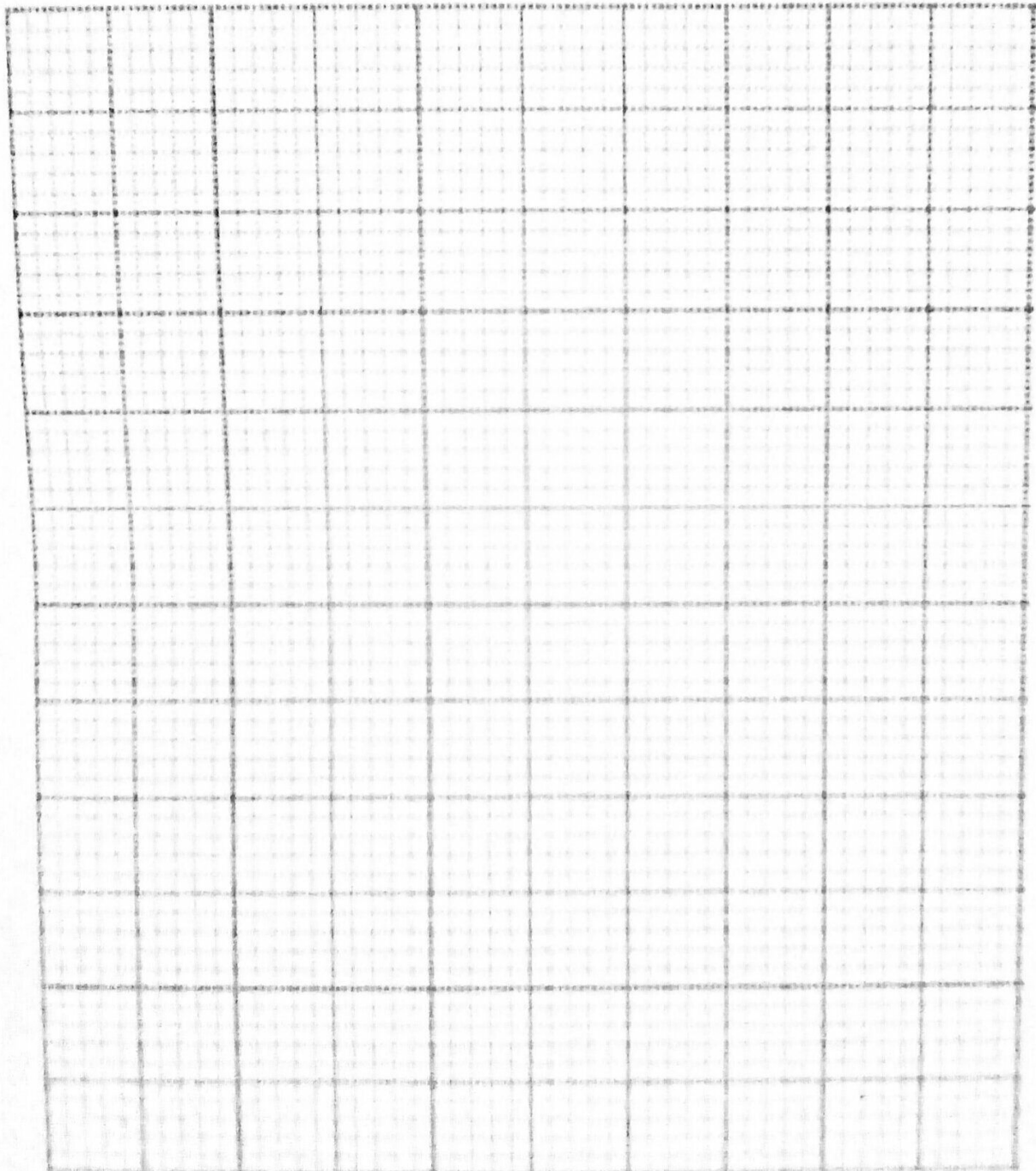
[10]

a. The circulation of a certain newspaper from 2001 to 2005 is given as follows.

Draw a bar graph to illustrate this information.

[/4]

Year	2001	2002	2003	2004	2005
No. of copies (in thousands)	250	275	290	315	280



b. The owner of a shop kept a record of the sizes of blouses sold on a particular day.

The record showed: 8, 8, 10, 8, 10, 12, 10, 8, 8, 12

i. Find the mean size of blouses sold.

[]/2]

ii. Find the mode of the sizes.

[]/1]

c. Draw a circle of radius 3cm.

Label centre, radius, diameter and circumference.

[]/3]

Q.10

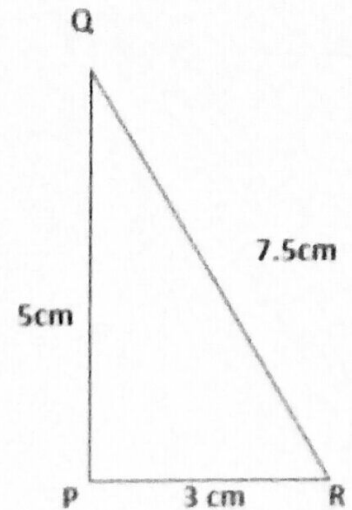
[10]

a.

i. Find the area of triangle PQR

[2]

$$\begin{aligned}\text{Area of Triangle} &= \frac{1}{2} \times b \times h \\ &= \frac{1}{2} \times 3 \text{ cm} \times 5 \text{ cm} \\ &= \frac{15 \text{ cm}^2}{2} \\ &= 7.5 \text{ cm}^2\end{aligned}$$



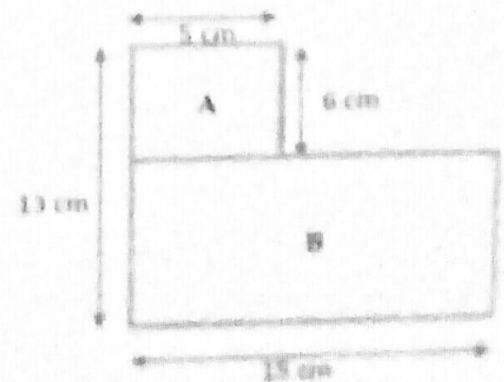
ii. Find the perimeter of the given triangle.

[1]

$$\begin{aligned}\text{Perimeter} &= a + b + c \\ &= 3 \text{ cm} + 7.5 \text{ cm} + 5 \text{ cm} \\ &= 15.5 \text{ cm}\end{aligned}$$

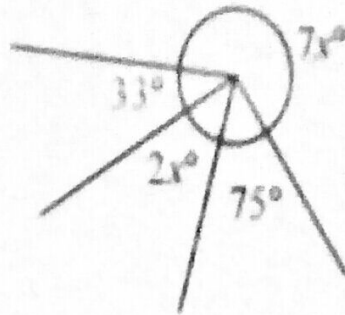
b. Calculate the perimeter of the composite shape drawn.

[3]



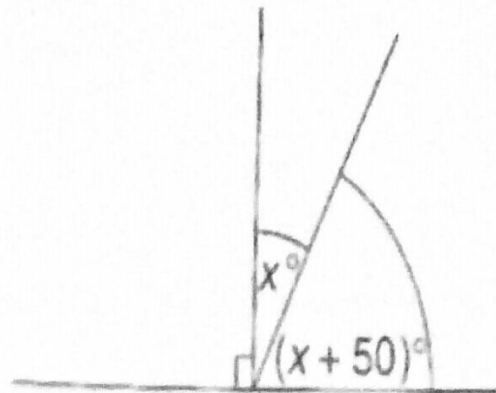
c. Calculate the value of x in the figures given below.

i.



[/2]

ii.



[/2]