

Class: 8th
Term 2nd 2023
MATH

Series-B

Time: 2 ½ Hours

Max. Marks: 40

Section (A) 8Q = 1M = 8 Marks

Q.No.1. Do as directed:

(I) One of the following is binomial, identify:

(a) $-(2y - 3z + 5)$

(b) $-\frac{12}{19}x^2yz$

(c) $\frac{x^2}{y} + y$

(d) $(2z - y)^2$

(II) The coefficient of y^2 in ' $y + a^3y^2 - a^2y^3$ ' is:

(a) 2

(b) a^3

(c) $-a^2$

(d) -1

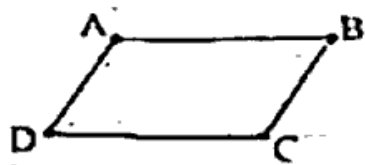
(III) Area of closed figure given in the unit square grid is approximate to:

(a) 22 square units

(b) 18 Square units

(c) 72 square units

(d) 14 square units



(IV) Prime factorization of 20 is:

(a) 2×10

(b) $2 \times 2 \times 5$

(b) $1 \times 2 \times 2 \times 5$

(d) 20×1

(V) Common factor of $6p$ and $12q$, is:

(a) $6pq$

(b) $6p$

(c) $6q$

(d) 6

(VI) The point $A(3,1)$ is units distant from XX' :

(a) 1 unit

(b) 3 units

(b) 2 units

(d) 4 units

(VII) Identify the number divisible by 6:

(a) 236

(b) 428

(c) 1032

(d) 4442

(VIII) An odd number divides only odd number.

(True/False)

Section (B) 5Q × 2M = 10 Marks

Q.No.2.

Express 318600000000 in standard form.

Q.No.3.

Identify the given statements for their type of proportionality:

a) The population of a city and the area of land per person.

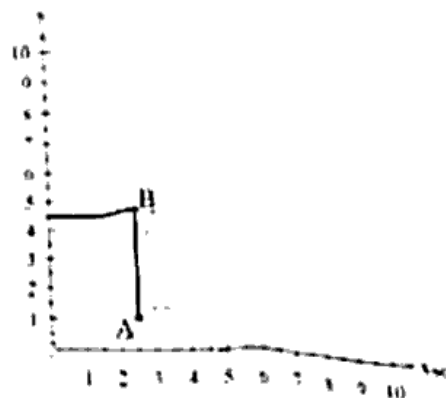
b) Number of persons and the time taken to complete the task.

Q.No.4.

In the given coordinate system, a line segment AB is traced. Observe it carefully and answer:

a) What is the length of the line segment AB?

b) What is the shortest distance between point A and XX'?



Q.No.5.

In the given Problem, find the value of A and B

$$\begin{array}{r} 1 \ A \\ + \ 2 \ 5 \\ \hline B \ 2 \end{array}$$

Q.No.6.

Factorize: $9x^2y^2 - 16$

Attempt any four questions from this section

Section (C) 4Q × 3M = 12 Marks

Q.No.7. A trapezium shaped table top has lengths of parallel sides 1m and 1.2m and the perpendicular distance between the parallel sides is 0.8m. Find its area.

Q.No.8. Using proper identity, find the value of 102^2

Q.No.9. Find the value of $5x - 9 - 10y$ when $x - 2y = 10$

Q.No.10. $q^2 - 10q + 21$ is factorized under. Observe it carefully to find the error and resolve it correctly.

$$\begin{aligned}q^2 - 10q + 21 &= q^2 - 7q + 3q + 21 \\&= q(q - 7) + 3(q + 7) \\&= (q + 3)(q - 7)(q + 7)\end{aligned}$$

Q.No.11. Use graph paper and draw a line passing through the points (1,3) and (3,1). Also find the coordinates of the point where the line meets YX'

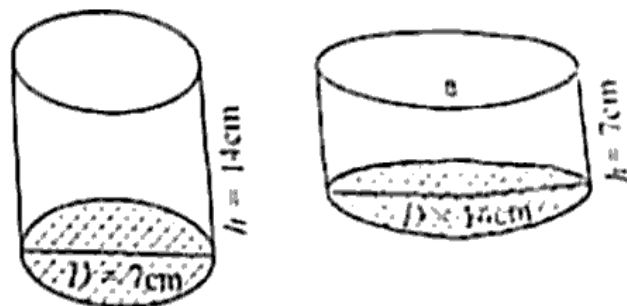
Q.No.12. Write the generalized form of:

a) 3-digit number

b) 4-digit number

Section (D) 2Q × 5M = 10 Marks

Q.No.13. Given adjacent are two cylindrical tanks. Which one has more capacity and by how much.



Or

100 rice bags each of volume 0.5m^3 are being stored in a godown of dimensions $4\text{m} \times 6\text{m} \times 3\text{m}$. How many more such bags of rice can be stored in the godown?

- Q.No.24. During a survey, the families of a locality are categorized into four categories as per their annual income (Given below). Draw a pie-chart to represent it:

Income	Number of families
0 – 1 Lakh	500
1 lakh – 5 lakhs	2000
5 lakhs – 10 lakhs	1000
Above 10 lakhs	500

Or

In the given graph, points A, B, C, D, E, F, G, H, I, are traced. Observe carefully and answer:

- Which type of quadrilateral is formed by joining the points CFGE.
- Which point has $(0, 4.5)$ coordinates?
- Write the coordinates of the point F
- Which type of angle is interior $\angle\text{GEB}$?
- Which type of quadrilateral is formed by joining the points B,D,G,E?

