PRISM WORLD

Std.: 8 (English) **Mathematics** **Marks: 50**

Date: **Time: 2 hrs**

Chapter: 10 to 17

Q.1 A) Choose the correct alternative. **(5)**

1) Represent '5' in Tally marks

a. V b. |||| c. 𝍸 d. 𝍸

2) If the volume of cube is 729 cm^3, then the side is

a. 6 cm b. 8 cm c. 9 cm d. 11 cm

3) If $y + 4 = 3 (y – 2)$ then value of y is.

a. 2 b. 4 c. 5 d. 6

4) The lengths of diagonals of rhombus are 14 cm and 10 cm respectively. Find area.

a. 70 cm^2 b. 60 cm^2 c. 80 cm^2 d. 75 cm^2

5) If the measure of central angle is 30° then the measure of the corresponding major arc is.

a. 20° b. 60° c. 300° d. 330°

B) Answer the following: **(5)**

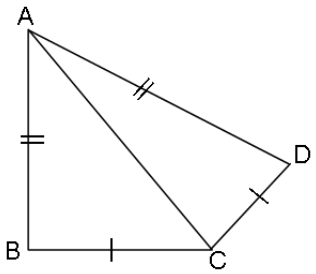
1) Write the degree of each of the following polynomials.
$3x^2 + 1$

2) If area of a parallelogram is 29.6 sq cm and its base is 8 cm, find its height.

3) Find the volume of the cylinder if height (h) and radius of the base (r) are as given below.
r = 2.5 cm, h = 7 cm

4) Divide. Write the quotient and the remainder.
$(-48p^4) \div (-9p^2)$

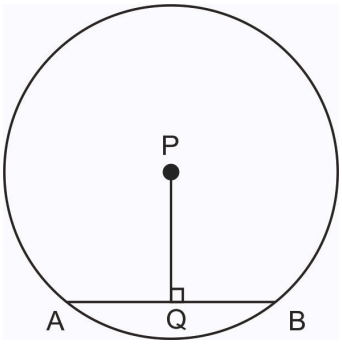
5) Find if the following pairs of triangles are congruent or not. Also state the Axiom.



Q.2 Solve: (Attempt any 5) **(10)**

1)

In a circle with centre P, chord AB is drawn of length 13 cm, seg PQ ⊥ chord AB, then find l(QB).



2) Find the volume of cylinder whose height is 7 m and radius is 10 m.

3) The marks scored by 20 students in a Science test (30 marks) are given below:
8, 7, 12, 17, 20, 11, 16, 21, 28, 25, 27, 18, 20, 19, 7, 29, 16, 15, 20, 27
Using the data answer the following questions:

(1) How many students scored the lowest marks?
(2) How many students scored 20 marks?
(3) What is the frequency of score 27?
(4) How many students scored more than 20 marks?

4) Division of a monomial by a monomial
$(16m^3y^2) \div (4m^2y)$

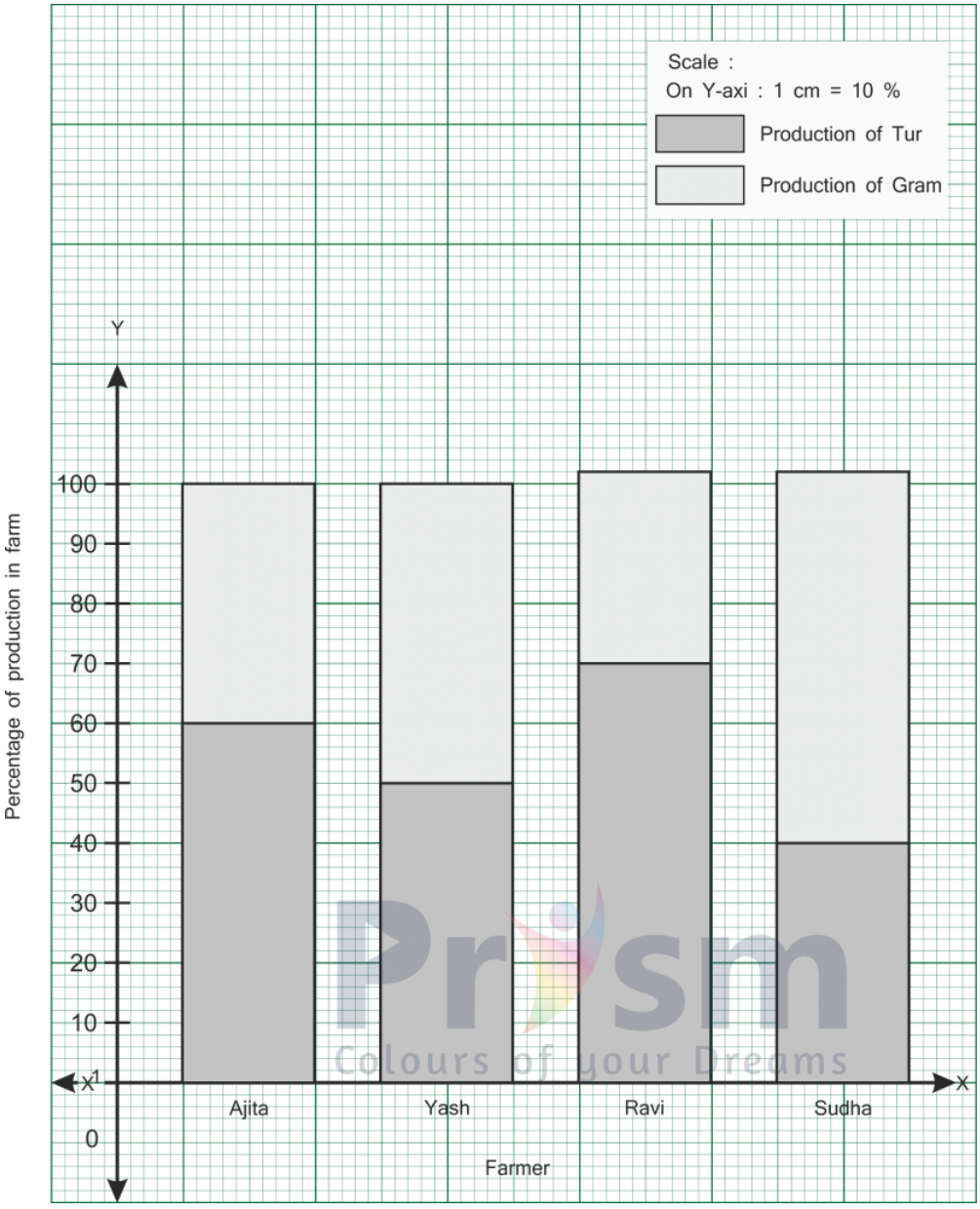
5) Find the area of an equilateral triangle whose one side is 5 cm.

6)
$\frac{9x}{8} + 1 = 10$

Q.3 Solve: (Attempt any 6) **(18)**

1) Find the area of a triangle whose base is 12 cm and height is 6 cm.

2) Observe the following graph and answer the questions.



i. State the type of the bar graph.
ii. How much percent is the Tur production to total production in Ajita's farm ?
iii. Compare the production of Gram in the farms of Yash and Ravi and state whose percentage of production is more and by how much ?
iv. Whose percentage production of Tur is the least?
v. State production percentages of Tur and gram in Sudha's farm.

3) Division of a polynomial by a monomial

$(6x^3+8x^2) \div (2x)$

4) The length of the sides of a triangle are in the ration 4:6:9. If the perimeter of the triangle is 114 cm. Find the length of each side

5) In a forest there are 40,000 trees. Find the expected number of trees after 3 years if the objective is to increase the number at the rate 5% per year.

6) The diameter of a cylinder is 7 cm and its height is 16 cm. Find (i) curved surface ara (ii) total surface area.

7) Find the length of a chord which is at a distance of 5 cm from the centre of a circle of radius 13 cm.

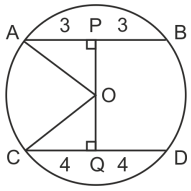
Q.4 Answer the following: (Attempt any 3) **(12)**

1) The Perimeter of a rhombus is 40 cm and length of one diagonals is 16 cm. Find the length of other diagonal and area.

2) At what rate percent per annum compound interest will Rs. 5000 amount to Rs. 5832 is 2 years.

3)

From the figure find PQ, given AB || CD, AB = 6, CD, AB = 6, CD = 8 cm & radius = 5 cm.



4) Complete the following table and find the mean number of children in a family.

Number Children in a family (x_i)	**Tally marks**	**f_i**	**$f_i \times x_i$**
1	𝍸 III	....	.....
2	𝍸 II	.....	.....
3	II	....	.....
4	III	....	.....
		N = 25	$\sum f_i x_i$ = ...