

**BCM SCHOOL, BASANT AVENUE, DUGRI, LUDHIANA.**

**JULY ASSIGNMENT**

**CLASS- IX (MATHEMATICS)**

**TOPICS: HERON'S FORMULA AND LINEAR EQUATIONS IN TWO VARIABLES**

**SECTION –A (MULTIPLE CHOICE QUESTIONS)**

1.	The equation of x-axis is (A) $y= 0$ (B) $x= 0$ (C) $y=x$ (D) $x=a$
2.	An isosceles right triangle has area $200 \text{ cm}^2$ . The length of its hypotenuse is: (A) $20\sqrt{2} \text{ cm}$ (B) $10 \text{ cm}$ (C) $10\sqrt{2} \text{ cm}$ (D) $30\sqrt{2} \text{ cm}$
3.	If $y$ varies directly as $x$ . If $y = 24$ , when $x = 8$ , then the linear equation is (A) $3y = x$ (B) $y = x$ (C) $y = 4x$ (D) $y = 3x$

**SECTION – B( 2 MARKS QUESTIONS)**

4.	If the point $(4,3)$ lies on the linear equation $3x - ay = 6$ , find whether $(-2,-6)$ also lies on the same line ?
5.	The perimeter of an isosceles triangle is $32 \text{ cm}$ . The ratio of the equal side to the base is $3:2$ , Find the area of the triangle.

**SECTION – C (3 MARKS QUESTIONS)**

6.	Find the area of triangle whose perimeter is $180 \text{ cm}$ and its two sides are $80 \text{ cm}$ and $18 \text{ cm}$ . Calculate the altitude of triangle corresponding to its shortest side.
7.	Determine the point on the graph of linear equation $2x + 5y = 19$ , whose ordinate is $1 \frac{1}{2}$ times the abscissa.

**SECTION – D (5 MARKS QUESTIONS)**

8.	i) The height of an equilateral triangle is $9 \text{ cm}$ . Find the area of equilateral triangle. ii) The sides of a triangle are $p$ , $q$ and $r$ . If $p + q = 45$ , $q + r = 40$ and $p + r = 35$ , then find the area of the triangle.
9.	For what value of $p$ ; $x = 2$ , $y = 3$ is a solution of $(p+1)x - (2p+3)y - 1 = 0$ ? i) Write the equation. ii) How many solutions of this equation are possible? iii) Is this line passes through the point $(-2,3)$ ? Give justification.

**SECTION – E ( CASE STUDY)**

10.

*A test consists of 'True' or 'False' questions. One mark is awarded for every correct answer while  $\frac{1}{4}$  mark is deducted for every wrong answer. A student knew answers to some of the questions. Rest of the questions he attempted by guessing. He answered 120 questions and got 90 marks.*

Type of Question	Marks given for correct answer	Marks deducted for wrong answer
True/ False	1	0.25

Let the number of questions whose answer is known to the student be  $x$  and questions attempted by guessing be  $y$ .

Read the above and answer the following questions:

1. If answer to all questions he attempted by guessing were wrong ,then how many questions did he answer correctly?

OR

How many questions did he guess ?

2. If answer to all questions he attempted by guessing were wrong and answered 80 correctly, then how many marks he got ?
3. If answer to all questions he attempted by guessing were wrong, then how many questions answered correctly to score 90?