

Assignment – 2

Subject: Mathematics

Class: XI

Date: 22-05-2018

Solve the following inequalities graphically:

1. $x + 2y \leq 3, 3x + 4y \geq 12, x \geq 0, y \geq 1$

2. $3x + 2y \geq 24, 3x + y \leq 15, x \geq 4$

3. $2x + y \geq 8, x + 2y \geq 10, x \geq 0, y \geq 0$

4. The water acidity in a pool is considered normal when the average pH reading of three daily measurements is between 8.2 and 8.5. If the first two pH readings are 8.48 and 8.35, find the range of pH value for the third reading that will result in the acidity level being normal.

5. A solution of 9% acid is to be diluted by adding 3% acid solution to it. The resulting mixture is to be more than 5% but less than 7% acid. If there is 460 litres of the 9% solution, how many litres of 3% solution will have to be added?

Solve and show the solution on the number line:

6. $\frac{4}{x+1} \leq 3 \leq \frac{6}{x+1}, (x > 0)$

7. $-5 \leq \frac{2-3x}{4} \leq 9$

8. $|x-1| \leq 5$