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Class 11 Maths Chapter 6 Linear Inequalities MCQs For Practice

1. Solution of the system of inequalities 4x - 12 ≥ 0 and 2x - 7 ≤ 5 is
(a) x ∈ (-3, 6)
(b) x ∈ (3, 6)
(c) x ∈ [-3, 6]
(d) x ∈ [3, 6]

2. If |x-3|/(x-3) >0, then
(a) x ∈ (-3, ∞)
(b) x = 1
(c) x ∈ (3, ∞)
(d) x ∈ [3, ∞)

3. If (x-2)/(x+5) >2, then
(a) x ∈ (-12, ∞)
(b) x = 1
(c) x ∈ (-5, ∞)
(d) x ∈ (-12, -5)

4. How many litres of water will have to be added to 600 litres of the 45% solution of acid so that the resulting mixture will contain more than 25%, but less than 30% acid content?
(a) More than or equal to 300 and less than or equal to 480 litres
(b) More than 300 litres but less than 480 litres
(c) More than or equal to 300 but less than 480 litres
(d) More than 300 litres but less than or equal to 480 litres

5. If (5x-8)/3 ≥ (4x-7)/2, then values of x if x is a natural number:
(a) x ∈ (-∞, 5/2]
(b) x ∈ [5/2, ∞)
(c) x ∈ {1, 2, 3, 4}
(d) x ∈ {1, 2}

6. The area of the intersection plane, obtained by plotting the following inequalities;
5x+4y ≤ 40, x ≥ 2, y ≥ 3 is
(a) 8.1 sq. units
(b) 8 sq. units
(c) 8.5 sq units
(d) 8.8 sq. units

7. Find a range of values of x for which $\frac{4}{x+1} \leq 3 \leq \frac{6}{x+1}$
(a) x ∈ (-∞, 1/3]
(b) x ∈ (1/3, 1]
(c) x ∈ [1/3, 1]
(d) x ∈ (-∞, 1]

8. A company manufactures cassettes. Its cost and revenue functions are C(x) = 26000 + 30x and R(x) = 43x, respectively, where x is the number of cassettes produced and sold in a week. How many cassettes must be sold by the company to realise some profit?

(a) $x \geq 26000$
(b) $x \geq 20000$
(c) $x > 20030$
(d) $x > 2000$

9. Find a range of values of x for which $\frac{1}{|x|-3} \leq \frac{1}{2}$

(a) $x \in (-\infty, -5] \cup (-3, 3) \cup [5, \infty)$
(b) $x \in (-\infty, -5) \cup (-3, 3) \cup (5, \infty)$
(c) $x \in (-\infty, -5] \cup [-3, 3] \cup [5, \infty)$
(d) $x \in (-\infty, -5] \cup (-3, 3] \cup [5, \infty)$

10. Find the value of x such that it satisfies the given system of inequalities:

$4x + 3 \geq 2x + 17, 3x - 5 < -2$

(a) $x \in R$
(b) $x \in (1, 2/3]$
(c) $x \in [1/3, 5]$
(d) No possible value

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Q.1 - (d)	Q.2 - (c)	Q.3 - (d)	Q.4. - (b)	Q.5 - (d)
Q.6 - (a)	Q.7 - (c)	Q.8 - (d)	Q.9 - (a)	Q.10 - (d)