

Name:

Linear Equations and Inequalities Worksheet

Solve the given linear inequalities

① $11(2x - 15) < x + 3$

② $x = \frac{6}{5}x - 2$

③ $12x - 1 \leq 3(4x - 3)$

④ $x(x - 4) - x^2 > 12 - 6x$

⑤ $4(y^2 + 1) + 8(3y - 4) > 4y^2$

⑥ $(x - 2)(x - 1) \geq (x - 3)(x + 1)$

⑦ $5(x - 1) + 7 \leq 1 - 3(2 + x)$

⑧ $3(x - 3) = 4(2x + 1)$

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Answers

$$\boxed{1} \quad 11(2x - 15) < x + 3$$

$$x < 8$$

$$\boxed{2} \quad x = \frac{6}{5}x - 2$$

$$y = -2$$

$$\boxed{3} \quad 12x - 1 \leq 3(4x - 3)$$

No Solution

$$\boxed{4} \quad x(x - 4) - x^2 > 12 - 6x$$

$$x > 6$$

$$\boxed{5} \quad 4(y^2 + 1) + 8(3y - 4) > 4y^2$$

$$y > \frac{7}{6}$$

$$\boxed{6} \quad (x - 2)(x - 1) \geq (x - 3)(x + 1)$$

$$x \leq 5$$

$$\boxed{7} \quad 5(x - 1) + 7 \leq 1 - 3(2 + x)$$

$$x \leq -\frac{7}{8}$$

$$\boxed{8} \quad 3(x - 3) = 4(2x + 1)$$

$$x = -\frac{13}{5}$$