

**Solving Compound Inequalities**

Multi-step: S1

Solve each inequality.

1)  $x + \frac{2x}{3} \leq -5$  and  $6(9 + 3x) < 18$

2)  $12 > \frac{4x - 8}{5} > -16$

3)  $\frac{-x + 23}{7} > 4$  or  $\frac{-x - 1}{2} > 4$

and  $-38 > 19(6x - 8)$

5)  $-13 \leq \frac{9x + 2}{4} < 5$

or  $\frac{5x - 7}{6} \geq 3$

7)  $-45 \geq 15(7x + 18)$  or  $-10 \geq \frac{x}{9} + x$

8)  $14 > \frac{-x + 35}{3}$  and  $\frac{-x - 46}{11} \leq -5$

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**Solving Compound Inequalities**

Multi-step: S1

Solve each inequality.

1)  $x + \frac{2x}{3} \leq -5$  and  $6(9 + 3x) < 18$

$x \leq -3$

2)  $12 > \frac{4x - 8}{5} > -16$

$-18 < x < 17$

3)  $\frac{-x + 23}{7} > 4$  or  $\frac{-x - 1}{2} > 1$

$x < -5$  or  $x < -3$

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and  $-38 > 19(6x - 8)$

$8 < x < 1$

5)  $-13 \leq \frac{9x + 2}{4} < 5$

$-6 \leq x < 2$

or  $\frac{5x - 7}{6} \geq 3$

$x < -8$  or  $x \geq 5$

7)  $-45 \geq 15(7x + 18)$  or  $-10 \geq \frac{x}{9} + x$

$x \leq -3$

8)  $14 > \frac{-x + 35}{3}$  and  $\frac{-x - 46}{11} \leq -5$

$x \geq 9$