

Name : \_\_\_\_\_

Score : \_\_\_\_\_

## Solving Compound Inequalities

Multi-step: S2

Solve each inequality.

1)  $-52 \geq 13(4x + 36)$  or  $-6 \geq \frac{x}{2} + x$

2)  $3 \geq \frac{x+19}{8}$  and  $\frac{x-15}{10} < -4$

3)  $-9 \leq \frac{8x+5}{3} < 15$

or  $\frac{7x-2}{5} \geq 8$

5)  $\frac{-x+35}{4} > 11$  or  $\frac{-x-}{7}$

d  $-27 > 3(2x - 5)$

7)  $x + \frac{6x}{5} \leq -22$  and  $13(7 + 5x) < 26$

8)  $6 > \frac{3x-9}{2} > -12$

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**Answer key**

Score : \_\_\_\_\_

**Solving Compound Inequalities**

Multi-step: S2

Solve each inequality.

1)  $-52 \geq 13(4x + 36)$  or  $-6 \geq \frac{x}{2} + x$

$x \leq -4$

2)  $3 \geq \frac{x+19}{8}$  and  $\frac{x-15}{10} < -4$

$x < -25$

3)  $-9 \leq \frac{8x+5}{3} < 15$

$-4 \leq x$

or  $\frac{7x-2}{5} \geq 8$

$x \leq -2$  or  $x \geq 6$

5)  $\frac{-x+35}{4} > 11$  or  $\frac{-x-7}{7} > 11$

$x < -9$  or  $x < -84$

and  $-27 > 3(2x-5)$

$6 < x < -2$

7)  $x + \frac{6x}{5} \leq -22$  and  $13(7 + 5x) < 26$

$x \leq -10$

8)  $6 > \frac{3x-9}{2} > -12$

$-5 < x < 7$

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