

Compound Inequalities Bell Work

Graph the solution set of each compound inequality.

1. $x \geq 4$ or $x < 0$



2. $x > 2$ or $x \geq 5$



Write a compound inequality for each graph.



Solve each compound inequality. Then graph the solution set.

7. $2x - 7 \leq 5$ and $3x + 6 \geq 12$



8. $11 < 3x - 4 < 20$

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Compound Inequalities Bell Work



Write and solve each inequality.

9. A number is less than negative two minus the number and at least negative four.

Word Problem

10. **The weight of an apple is between 100 to 200 grams.** Write the compound inequality that describes the weight of an apple.

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ANSWER

Graph the solution set of each compound inequality.

1. $x \geq 4$ or $x < 0$



2. $x > 2$ or $x \geq 5$



Write a compound inequality for each graph.



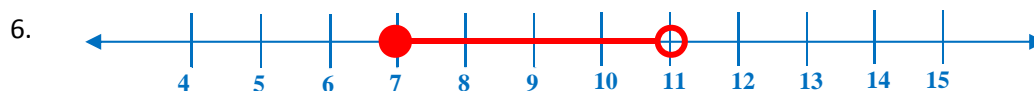
$x \leq -4$ or $x > 3$



$x < -1$ or $x > 6$



$x > -6$ and $x \leq -1$

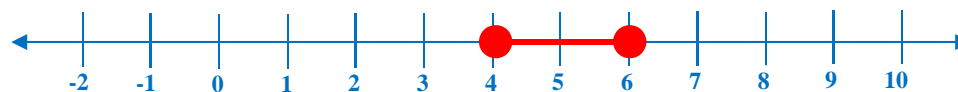


$7 \leq x < 11$

Compound Inequalities Bell Work

Solve each compound inequality. Then graph the solution set.

7. $2x - 7 \leq 5$ and $3x + 6 \geq 12$ $4 \leq x \leq 6$



$2x - 7 \leq 5$

$3x + 6 \geq 12$

$2x - 7 + 7 \leq 5 + 7$

$3x + 6 - 6 \geq 12 - 6$

$2x \leq 12$

$3x \geq 6$

$\frac{2x}{2} \leq \frac{12}{2}$

$\frac{3x}{3} \geq \frac{12}{3}$

$x \leq 6$

$x \geq 4$

8. $11 < 3x - 4 < 20$ $5 < x < 8$



$11 < 3x - 4$

$3x - 4 < 20$

$11 + 4 < 3x - 4 + 4$

$3x - 4 + 4 < 20 + 4$

$15 < 3x$

$3x < 24$

$\frac{15}{3} < \frac{3x}{3}$

$\frac{3x}{3} < \frac{24}{3}$

$5 < x$

$x < 8$

Write and solve each inequality.

9. A number is less than negative two minus the number and at least negative four.

$x < -2 - x$

$x \geq -4$

$x + x < -2 - x + x$

$2x < -2$

$\frac{2x}{2} < \frac{-2}{2}$

$x < -1$

$-4 \leq x < -1$

Word Problem

10. The weight of an apple is between 100 to 200 grams. Write the compound inequality that describes the weight of an apple.

$100 \text{ g} \leq x \leq 200 \text{ g}$