

Solving Compound Inequalities

Solve each compound inequality and graph its solution.

1) $2x - 5 \geq -11$ or $x + 9 \leq 1$

$2x - 5 \geq -11$
 $+5 \quad +5$
 $2x \geq -6$
 $x \geq -3$

$x + 9 \leq 1$
 $-9 \quad -9$
 $x \leq -8$

2) $-47 < 2 - 7n \leq -33$

$-47 < 2 - 7n \leq -33$
 $-2 \quad -2$
 $-49 < -7n \leq -35$
 $-7 \quad -7$
 $7 > n \geq 5$

3) $3 < 10 - n \leq 7$

4) $-26 \leq 9 - 7n < 79$

5) $6 - 8k \geq 22$ or $-2 - k \leq -5$

6) $-1 + 8r > 47$ or $2 - 6r \geq 44$

7) $-9 + 3n \geq 0$ or $-8n - 1 > 31$

8) $4 - 8v < 76$ and $v + 8 \leq 3$

9) $8 + 7b \geq 22$ and $7 - 10b > -23$

10) $4 - 9x > 31$ or $4 + 6x > 52$

11) $-7 \leq 3x - 1 \leq 29$

12) $3a - 9 < -27$ or $2a + 5 \geq 11$