

## Solve Compound Inequalities

 **Solve each inequality.**

1)  $8 \geq 2x > -10$

2)  $-14 < -11 + x \leq -12$

3)  $x + 11 > 9$  or  $8x \geq -24$

4)  $x + 9 > 6$  or  $x - 1 \leq -10$

5)  $x + 2 \leq -3$  or  $x - 5 > -2$

6)  $-15 \leq x - 13 \leq 0$

7)  $20x > 40$  or  $\frac{x}{7} > 2$

8)  $-11 < \frac{x}{3} < -9$

9)  $\frac{x}{6} \leq 4$  and  $x - 22 > -23$

10)  $x - 2 \leq 3$  and  $\frac{x}{7} > -5$

11)  $y - 6 \leq -7$  or  $y + 3 \geq 7$

12)  $27 < 3a < 39$

13)  $5n \geq 5$  and  $n + 2 \leq 9$

14)  $x - 5 < -1$  or  $x + 6 > 14$

15)  $-4 < x + 11 < 2$

16)  $8x \leq 32$  or  $6x \geq 72$

17)  $10 > x > -8$

18)  $\frac{x}{2} \leq 1$  or  $x + 9 > 14$

21)  $12n < 24$  or  $\frac{n}{9} \geq 13$

22)  $x + 9 \geq 15$  and  $\frac{x}{6} \leq 4$

23)  $-8 \leq \frac{m}{2} < 5$

24)  $r + 6 \geq 19$  or  $\frac{r}{3} < -6$

 **Solve each compound**

**inequality and graph its solution.**

19)  $x - 5 < -9$  or  $\frac{x}{5} > 3$

20)  $-4 < 12 + a < 22$

## Answers

### Compound Inequalities

1)  $4 \geq x > -5$

4)  $x > -3$  or  $x \leq -9$

7)  $x > 2$  or  $x > 14$

2)  $-3 < x \leq -1$

5)  $x \leq -5$  or  $x > 3$

8)  $-33 < x < -27$

3)  $x > -2$  or  $x \geq -3$

6)  $-2 \leq x \leq 13$

9)  $x \leq 24$  and  $x > -1$

10)  $x - 2 \leq 3$  and  $\frac{x}{7} > -5$

15)  $-4 < x + 11 < 2$

11)  $y - 6 \leq -7$  or  $y + 3 \geq 7$

16)  $8x \leq 32$  or  $6x \geq 72$

12)  $27 < 3a < 39$

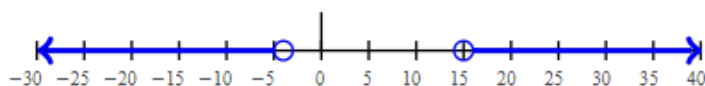
17)  $10 > x > -8$

13)  $5n \geq 5$  and  $n + 2 \leq 9$

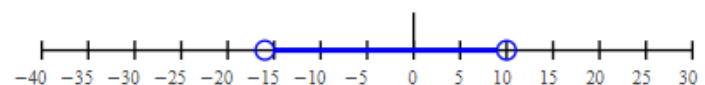
18)  $\frac{x}{2} \leq 1$  or  $x + 9 > 14$

14)  $x - 5 < -1$  or  $x + 6 > 14$

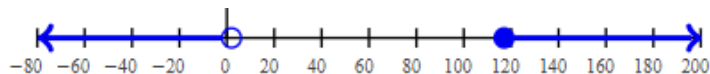
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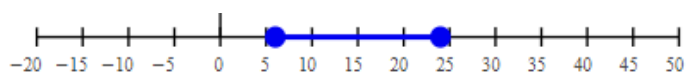
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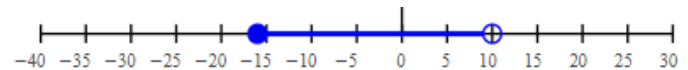
21)



22)



23)



24)

