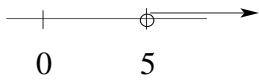


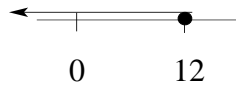
# Inequalities Introduction (KEY)

Solve, check, and graph.

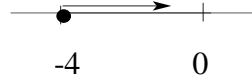
1)  $a > 5$



2)  $q \leq 12$



3)  $d \geq -4$



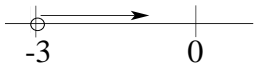
4)  $t - 9 \geq 24$

$$\begin{array}{r} +9 \quad +9 \\ \hline t \geq 33 \end{array}$$

✓  $(35) - 9 \geq 24$   
 $26 \geq 24$  ✓



5)  $-3 < y$



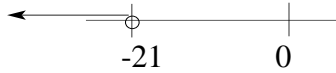
6)  $-7 > \frac{x}{3}$

$$(3)(-7) > \frac{x(3)}{3}$$

$$\boxed{-21 > x}$$

✓  $-7 > \frac{(-30)}{3}$

$-7 > -10$  ✓



7)  $\frac{y}{4} > -13$

$$(4)\frac{y}{4} > -13(4)$$

$$\boxed{y > -52}$$

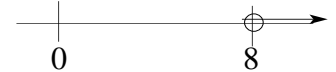
✓  $\frac{(0)}{4} > -13$

$0 > -13$  ✓



8)  $32 < 4x$

$$\boxed{8 < x}$$

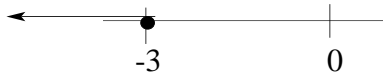


9)  $b \leq 8$



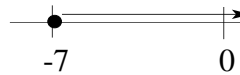
10)  $w + 4 \leq 1$

$$\boxed{w \leq -3}$$



11)  $\frac{-11m}{-11} \leq \frac{77}{-11}$

$$\boxed{m \geq -7}$$

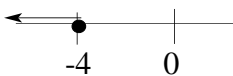


12)  $\frac{12}{-1} \leq \frac{-w}{-1}$

$$\boxed{-12 \geq w}$$

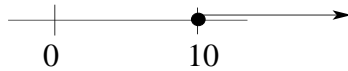


13)  $-4 \geq v$



14)  $7 \leq t - 3$

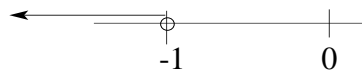
$$\boxed{10 \leq t}$$



15)  $\frac{13}{-13} + v < \frac{12}{-13}$

$$\boxed{v < -1}$$

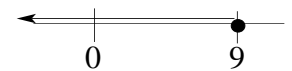
✓  $13 + (-5) < 12$   
 $8 < 12$  ✓



16)  $3k - 10 \leq 17$

$$\begin{array}{r} +10 \quad +10 \\ \hline 3k \leq 27 \\ \hline k \leq 9 \end{array}$$

✓  $3(0) - 10 \leq 17$   
 $-10 \leq 17$  ✓



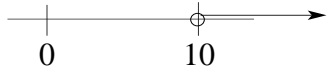
$$17) \quad x - 7 > 3$$

$$+7 \quad +7$$

$$x > 10$$

$$\checkmark (15) - 7 > 3$$

$$8 > 3 \checkmark$$



$$18) \quad -9t < 63$$

$$-9 \quad -9$$

$$t > -7$$

$$\checkmark -9(0) < 63$$

$$0 < 63 \checkmark$$



$$19) \quad 45 > 20 - 5r$$

$$-20 \quad -20$$

$$25 > -5r$$

$$-5 \quad -5$$

$$-5 < r$$

$$\checkmark 45 > 20 - 5(0)$$

$$45 > 20 \checkmark$$



$$20) \quad 16 \leq 32 - 8b$$

$$-32 \quad -32$$

$$-16 \leq -8b$$

$$-8 \quad -8$$

$$2 \geq b$$

$$\checkmark 16 \leq 32 - 8(0)$$

$$16 \leq 32 \checkmark$$



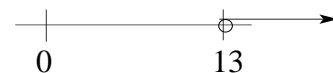
$$21) \quad -5 > x + 2$$

$$-7 > x$$



$$22) \quad -4 + k > 9$$

$$k > 13$$



$$23) \quad 6t + 3t > -54$$

$$t > -6$$



$$24) \quad 4 > -\frac{t}{5}$$

$$-20 < t$$



$$25) \quad \frac{4x}{4} \leq \frac{20}{4}$$

$$x \leq 5$$

$$\checkmark 4(0) \leq 20$$

$$0 \leq 20 \checkmark$$



$$26) \quad 4v - 3 > 53$$

$$+3 \quad +3$$

$$4v > 56$$

$$4 \quad 4$$

$$v > 14$$

$$\checkmark 4(20) - 3 > 53$$

$$80 - 3 > 53$$

$$77 > 53 \checkmark$$



$$27) \quad 14 - b \geq -6$$

$$-14 \quad -14$$

$$b \geq -20$$

$$-1 \quad -1$$

$$b \leq 20$$

$$\checkmark 14 - (0) \geq -6$$

$$14 \geq -6 \checkmark$$



$$28) \quad 29 \geq 4b - 16 - 9b$$

$$+16 \quad +16$$

$$45 \geq -5b$$

$$-5 \quad -5$$

$$-9 \leq b$$

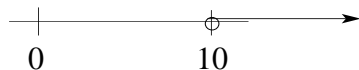
$$\checkmark 29 \geq 4(0) - 16 - 9(0)$$

$$29 \geq -16 \checkmark$$



$$29) \quad 2 < \frac{x}{5}$$

$$10 < x$$



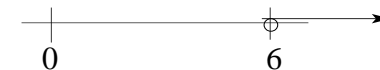
$$30) \quad 20 \geq 14 + \frac{a}{-6}$$

$$-36 \leq a$$



$$31) \quad 3c + 10 < 7c - 14$$

$$6 < c$$



$$32) \quad 14d + 32 > 10d$$

$$d > -8$$



$$33) \quad 8 + c > 12$$

$$-8 \quad -8$$

$$c > 4$$

$$\checkmark 8 + (10) > 12$$

$$18 > 12 \checkmark$$



$$34) \quad 3m + 9 + 8m \leq 42$$

$$-9 \quad -9$$

$$11m \leq 33$$

$$11 \quad 11$$

$$m \leq 3$$

$$\checkmark 3(0) + 9 + 8(0) \leq 42$$

$$9 \leq 42 \checkmark$$



$$35) \quad 21 \leq -7(m + 4)$$

$$21 \leq -7m - 28$$

$$+28 \quad +28$$

$$49 \leq -7m$$

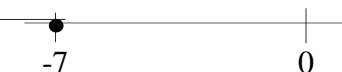
$$-7 \quad -7$$

$$-7 \geq m$$

$$\checkmark 21 \leq -7((-10) + 4)$$

$$21 \leq -7(-6)$$

$$21 \leq 42 \checkmark$$



$$36) \quad 10p - 13 < 11p$$

$$-10p \quad -10p$$

$$-13 < p$$

$$\checkmark 10(0) - 13 < 11(0)$$

$$-13 < 0 \checkmark$$



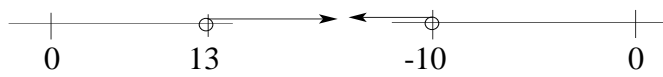
$$37) -8x \geq 24$$

$$x \geq -3$$



$$38) 7y > 3y + 52$$

$$y > 13$$



$$39) 4v > 5v + 10$$

$$v < -10$$

$$40) 2(-5c + 8) > -44$$

$$c < 6$$



$$41) \frac{m}{-2} < 6$$

$$m < -12$$



$$42) 3(-2n + 7) \leq 39$$

$$n \geq -3$$

