

3.1

1) $n > -5$



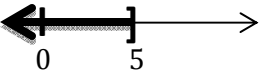
$(-5, \infty)$

3) $-2 \geq k$



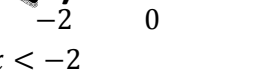
$(-\infty, -2]$

5) $5 \geq x$



$(-\infty, 5]$

7) $x < -2$



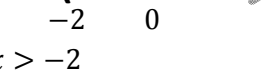
$x < -2$

9) $x \geq 5$



$x \geq 5$

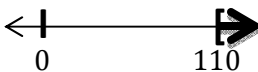
11) $x > -2$



$x > -2$

13) $(11) \frac{x}{11} \geq 10(11)$

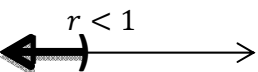
$x \geq 110$



$[110, \infty)$

15) $2 + r < 3$

$-2 \quad -2$



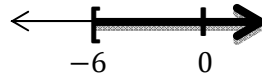
$r < 1$

$(-\infty, 1)$

17) $8 + \frac{n}{3} \geq 6$

$$\frac{-8 \quad -8}{(3) \frac{n}{3} \geq -2(3)}$$

$$n \geq -6$$



$[-6, \infty)$

19) $(5) 2 > \frac{a-2}{5} (5)$

$$10 > a - 2$$

$$\frac{+2 \quad +2}{12 > a}$$

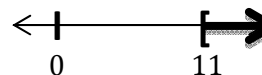


$(-\infty, 12)$

21) $-47 \geq 8 - 5x$

$$\frac{-8 \quad -8}{-\frac{55}{-5} \geq -\frac{5x}{-5}}$$

$$11 \leq x$$



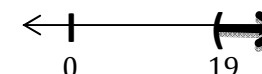
$[11, \infty)$

23) $-2(3 + k) < -44$

$-6 - 2k < -44$

$$\frac{+6 \quad +6}{-\frac{2k}{-2} < -\frac{38}{-2}}$$

$$k > 19$$



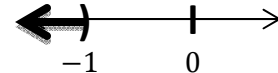
$(19, \infty)$

25) $18 < -2(-8 + p)$

$18 < 16 - 2p$

$$\frac{-16 \quad -16}{\frac{2}{-2} < \frac{-2p}{-2}}$$

$$-1 > p$$



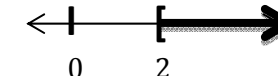
$(-\infty, -1)$

27) $24 \geq -6(m - 6)$

$24 \geq -6m + 36$

$$\frac{-36 \quad -36}{-\frac{12}{-6} \geq -\frac{6m}{-6}}$$

$2 \leq m$



$[2, \infty)$

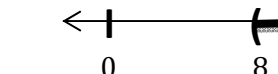
29) $-r - 5(r - 6) < -18$

$-r - 5r + 30 < -18$

$-6r + 30 < -18$

$$\frac{-30 \quad -30}{-\frac{6r}{-6} < \frac{-48}{-6}}$$

$r > 8$



$(8, \infty)$

31) $24 + 4b < 4(1 + 6b)$

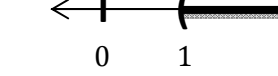
$24 + 4b < 4 + 24b$

$$\frac{-4b \quad -4b}{24 < 4 + 20b}$$

$-4 \quad -4$

$$\frac{20}{20} < \frac{20b}{20}$$

$1 < b$



$(1, \infty)$

$$33) -5v - 5 < -5(4v + 1)$$

$$-5v - 5 < -20v - 5$$

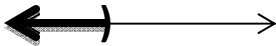
$$\frac{+20v}{15v - 5} \quad \frac{+20v}{-5}$$

$$15v - 5 < -5$$

$$\frac{+5}{15v} \quad \frac{+5}{0}$$

$$15v < 0$$

$$v < 0$$



0

$(-\infty, 0)$

$$35) 4 + 2(a + 5) < -2(-a - 4)$$

$$4 + 2a + 10 < 2a + 8$$

$$14 + 2a < 2a + 8$$

$$\frac{-2a}{14} \quad \frac{-2a}{8}$$

$$14 < 8$$

false

No solution \emptyset

$$37) -(k - 2) > -k - 20$$

$$-k + 2 > -k - 20$$

$$\frac{+k}{2} \quad \frac{+k}{-20}$$

$$2 > -20$$

true

All real numbers \mathbb{R}