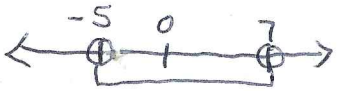
Page 204-205 Exercises 9-37

(9) $-5 < x < 7$



(10) $28.5 \leq x \leq 29$

(11)

$$\begin{array}{ccccc} -4 & < & K+3 & < & 8 \\ -3 & & -3 & & -3 \\ \hline -7 & < & K & < & 5 \end{array}$$

(12)

$$\begin{array}{ccccc} 5 & \leq & y+2 & \leq & 11 \\ -2 & & -2 & & -2 \\ \hline 3 & \leq & y & \leq & 9 \end{array}$$

(13)

$$\begin{array}{ccccc} 3 & < & 4p-5 & < & 15 \\ +5 & & +5 & & +5 \\ \hline \frac{8}{4} & < & \frac{4p}{4} & < & \frac{20}{4} \\ \hline 2 & < & p & < & 5 \end{array}$$

(14)

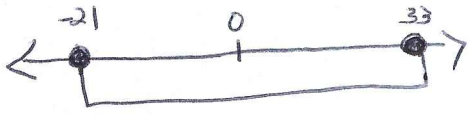
$$\begin{array}{ccccc} (3)\,15 & \leq & \frac{20+11+K}{3} & \leq & 19\,(3) \\ \hline 45 & \leq & 31+K & \leq & 57 \\ -31 & & -31 & & -31 \\ \hline 14 & \leq & K & \leq & 26 \end{array}$$

(15)

$$\begin{array}{ccccc} (2)\,\frac{1}{4} & < & \frac{2x-7}{2} & < & 5\,(2) \\ \hline \frac{1}{2} & < & 2x-7 & < & 10 \\ +7 & & +7 & & +7 \\ \hline \frac{7\frac{1}{2}}{2} & < & \frac{2x}{2} & < & \frac{17}{2} \\ \hline 3\frac{3}{4} & < & x & < & 8\frac{1}{2} \end{array}$$

(16)

$$\begin{array}{ccccc} (9)\,-3 & \leq & \frac{6-9}{9} & \leq & 3\,(9) \\ \hline -27 & \leq & 6-9 & \leq & 27 \\ -6 & & -6 & & -6 \\ \hline -33 & \leq & -9 & \leq & 21 \\ \hline -1 & & -1 & & -1 \\ \hline 33 & \geq & x & \geq & -21 \end{array}$$

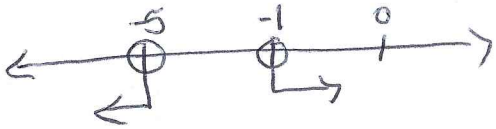


(17) $6b - 1 < -7$ $+1 \quad +1$ $\frac{6b}{6} < \frac{-6}{6}$ $b < -1$

$2b + 1 > 5$ $-1 \quad -1$ $\frac{2b}{2} > \frac{4}{2}$ $b > 2$

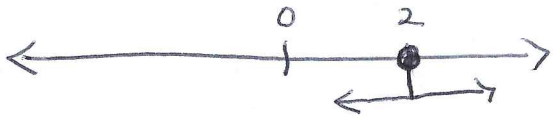
(18) $5 + m > 4$ $-5 \quad -5$ $m > -1$

$\frac{7m}{7} < \frac{-35}{7}$ $m < -5$



(19) $4d + 5 \geq 13$ $-5 \quad -5$ $\frac{4d}{4} \geq \frac{8}{4}$ $d \geq 2$

$7d - 2 < 12$ $+2 \quad +2$ $\frac{7d}{7} < \frac{14}{7}$ $d < 2$



(20) $7 - c < 1$ $-7 \quad -7$ $\frac{-c}{-1} < \frac{-6}{-1}$ $c > 6$

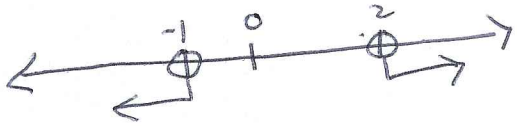
$\frac{4c}{4} \geq \frac{12}{4}$ $c \geq 3$

(21) $5y + 7 \leq -3$ $-7 \quad -7$ $\frac{5y}{5} \leq \frac{-10}{5}$ $y \leq -2$

$3y - 2 \geq 13$ $+2 \quad +2$ $\frac{3y}{3} \geq \frac{15}{3}$ $y \geq 5$

(22) $5z - 3 > 7$ $+3 \quad +3$ $\frac{5z}{5} > \frac{10}{5}$ $z > 2$

$4z - 6 < -10$ $+6 \quad +6$ $\frac{4z}{4} < \frac{-4}{4}$ $z < -1$



(23) $(-\infty, 2]$

$x \leq 2$

(24) $[-4, 5]$

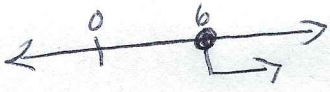
$-4 \leq x \leq 5$

(25) $(-\infty, -1]$ or $(3, \infty)$

$x \leq -1$ or $x > 3$

(26) $[6, \infty)$

$x \geq 6$



(27) $x > -2$

$(-2, \infty)$

(28) $x \leq 0$

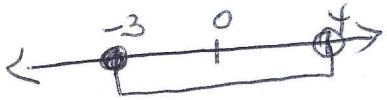
$(-\infty, 0]$

(29) $x < -2$ or $x \geq 1$

$(-\infty, -2)$ or $[1, \infty)$

(30) $-3 \leq x < 4$

$[-3, 4)$



(31)

$$\begin{array}{rrrr} 7 & < x+6 & \leq & 12 \\ -6 & & -6 & -6 \\ \hline 1 & < x & \leq & 6 \end{array}$$

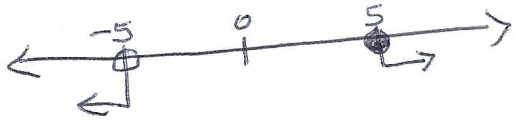
$(1, 6]$

(32)

$$\begin{array}{rrrr} -9 & < 3m+6 & \leq & 18 \\ -6 & & -6 & -6 \\ \hline \frac{-15}{3} & < \frac{3m}{3} & \leq & \frac{12}{3} \\ -5 & < m & \leq & 4 \end{array}$$

(33) $f + 14 \leq 9$ or $\frac{-9f}{-9} \geq \frac{-45}{-9}$

$$\begin{array}{rrrr} f+14 & \leq 9 & \text{or} & \frac{-9f}{-9} \geq \frac{-45}{-9} \\ -14 & -14 & & \\ \hline f & \leq -5 & & f \geq 5 \end{array}$$



(34) $12h - 3 \geq 15h$ or ~~-0.2~~ $5 > -.2h + 10$

$$\begin{array}{rrrr} 12h & -3 & \geq & 15h \\ -12h & & & -12h \\ \hline & \frac{-3}{3} & \geq & \frac{3h}{3} \\ & -1 & \geq & h \end{array}$$

$$\begin{array}{rrrr} 5 & > -.2h & + 10 & \\ -10 & & & -10 \\ \hline \frac{-5}{-.2} & > \frac{-.2h}{-.2} & & \\ 25 & < h & & \end{array}$$

(35) $-3 < x < 4$

(36) $x < -2$ or $x \geq 1$

(37) $3 \leq x < 6$