

Solving Multi-Step Inequalities

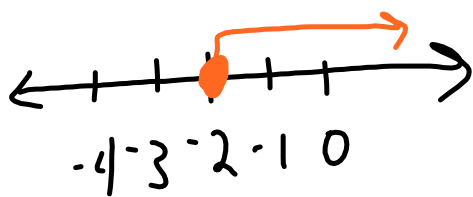
Softbook Pg 25

1) $4a + 8 \geq 0$

$$\begin{array}{r} -8 \quad -8 \\ \hline 4a \geq -8 \end{array}$$

$$\frac{4a}{4} \geq \frac{-8}{4}$$

$$a \geq -2$$

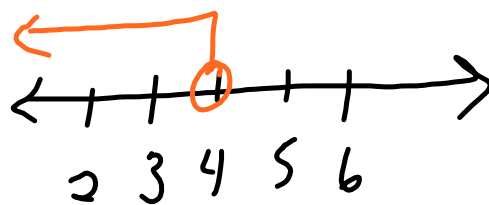


2) $\frac{-c}{2} - 6 > -8$

$$\begin{array}{r} \frac{-c}{2} - 6 > -8 \\ +6 \quad +6 \\ \hline \end{array}$$

$$\left(\frac{-2}{1}\right)\left(\frac{-c}{2}\right) > -2(-2)$$

$$c < 4$$



$$3) 8 \leq -4(d+1)$$

$$8 \leq -4d - 4$$

$$\begin{array}{r} +4 \qquad \qquad +4 \\ \hline \end{array}$$

$$\underline{12} \leq \underline{-4d}$$

$$\begin{array}{r} -4 \qquad \qquad -4 \\ \hline \end{array}$$

$$-3 \geq d$$

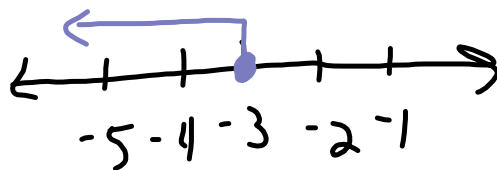
$$3) \underline{8} \leq \underline{-4(d+1)}$$

$$\begin{array}{r} -4 \qquad \qquad -4 \\ \hline \end{array}$$

$$-2 \geq d+1$$

$$\begin{array}{r} -1 \qquad \qquad -1 \\ \hline \end{array}$$

$$-3 \geq d$$

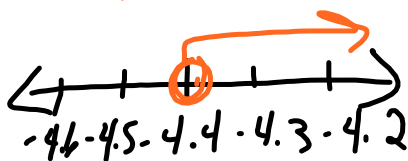


$$4) \frac{10.2}{-3} > \frac{-3(z+1)}{-3}$$

$$-3.4 < z+1$$

$$-1 \quad -1$$

$$-4.4 < z$$



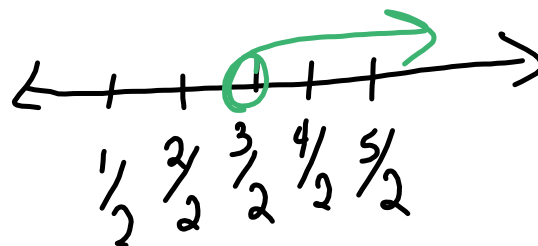
$$5) \frac{5-2n}{+4n} > \frac{8-4n}{+4n}$$

$$5+2n > 8$$

$$-5 \quad -5$$

$$\frac{2n}{2} > \frac{3}{2}$$

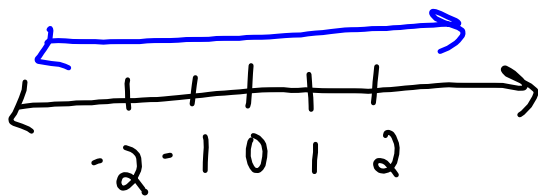
$$n > \frac{3}{2}$$



$$6) \quad 6h - 18 < 6h + 1$$

$$\begin{array}{r} -6h \qquad -6h \\ \hline -18 < 1 \end{array}$$

True



$$7) \quad 3p + 4 \geq -4p + 25$$

$$\begin{array}{r} +4p \qquad +4p \\ \hline 7p + 4 \geq 25 \\ -4 \quad -4 \end{array}$$

$$7p \geq 21$$

$$\frac{7p}{7} \geq \frac{21}{7}$$

$$p \geq 3$$

