


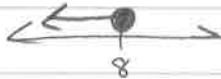
9/17 Algebra - Downing

Bellwork - Solve + graph

1.)
$$\frac{b-2}{+2} > \frac{-9}{+2}$$

$$b > -7$$



2.)
$$\frac{m-3}{+3} \leq \frac{5}{+3}$$

$$m \leq 8$$



3.)
$$\frac{1}{4} > y - \frac{1}{4}$$

$$\frac{1}{4} + \frac{1}{4} > y - \frac{1}{4} + \frac{1}{4}$$

$$\frac{2}{4} > y$$

$$\frac{1}{2} > y \text{ or } y < \frac{1}{2}$$


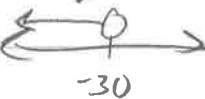
4.)
$$\frac{4b}{4} \geq \frac{36}{4}$$

$$b \geq 9$$


5.)
$$\frac{-18}{1.5} > \frac{15}{1.5}$$

$$-30 > q$$

or

$$q < -30$$


Ex) $\frac{x}{-5} \leq -5$ (-5) \star If you multiply or divide both sides by a negative... FLIP the SIGN!! \star

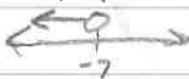
$$x \geq 25$$

Ex) $\frac{(-10)}{1} \geq \frac{-1}{10} z$ (-10)


$$-10 \leq z$$

$$z \geq -10$$

Ex) $\frac{-9m}{-9} > \frac{63}{-9}$

$$m < -7$$



Ex) $\frac{-2r}{-2} \geq \frac{-22}{-2}$

$$r \leq 11$$


Ex) $27 \geq 5x + 4x$

$$\frac{27}{9} \geq \frac{9x}{9}$$

$$3 \geq x$$


$$x \leq 3$$


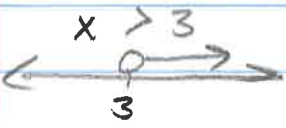
Ex) $-8x + 2x - 16 < -5x + 7x$

$$\frac{-6x - 16}{+6x} < \frac{2x}{+6x}$$

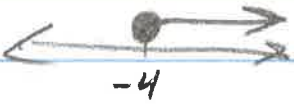
$$\frac{-16}{8} < \frac{8x}{8}$$

$$-2 < x$$

$$x > -2$$


$$\begin{aligned}
 \text{Ex) } & 3(x-3) - 5x > -3x - 6 \\
 & 3x - 9 - 5x > -3x - 6 \\
 & -2x - 9 > -3x - 6 \\
 & \quad +3x \quad +3x \\
 & \hline
 & x - 9 > -6 \\
 & \quad +9 \quad +9 \\
 & \hline
 & x > 3
 \end{aligned}$$


A number line with an open circle at 3 and an arrow pointing to the right, indicating the solution set $x > 3$.

$$\begin{aligned}
 \text{Ex) } & -5x - 6x \leq 8 - 8x - x \\
 & -11x \leq 8 - 9x \\
 & \quad +9x \quad +9x \\
 & \hline
 & -2x \leq 8 \\
 & \quad -x \quad -2 \\
 & \hline
 & x \geq -4
 \end{aligned}$$


A number line with a closed circle at -4 and an arrow pointing to the right, indicating the solution set $x \geq -4$.

Kahoot Game

$$\begin{aligned}
 \text{Ex) } & 8b - 3 > 4(2b + 3) \\
 & 8b - 3 > 8b + 12 \\
 & -8b \quad -8b \\
 & \hline
 & -3 > 12
 \end{aligned}$$

False \rightarrow No Solution

$$\begin{aligned}
 \text{Ex) } & 2(k-5) < 2k + 5 \\
 & 2k - 10 < 2k + 5 \\
 & -2k \quad -2k \\
 & \hline
 & -10 < 5
 \end{aligned}$$

True \rightarrow All Real #s \mathbb{R}

Ex) You need a mean score of at least 90 points to advance.
What scores in the 5th game will allow you to advance?

Your scores: 95, 91, 77, 89

Add up scores and divide by 5

$$\frac{95 + 91 + 77 + 89 + x}{5} \geq 90$$

$$(5) \frac{352 + x}{5} \geq 90 (5)$$

$$\begin{aligned}
 352 + x & \geq 450 \\
 -352 \quad -352 \\
 \hline
 x & \geq 98
 \end{aligned}$$

HW - p. 77 #3, 10, 16, 17, 21, 27, 28,
31-33