

Warm-Up: Solve (do NOT switch Left and Right Sides!!)

1) $m + 5 = 18$

$$\begin{array}{r|l} -5 & -5 \\ \hline m & = 13 \end{array}$$

3) $4.8 = -18 + k$

$$\begin{array}{r|l} +18 & +18 - \\ \hline 22.8 & = k \\ k & \end{array} \quad \boxed{k = 22.8}$$

2) $-32 = x - 8$

$$\begin{array}{r|l} +8 & +8 \\ \hline -24 & = x \end{array}$$

$$x = -24$$

4) $b + \frac{1}{3} = \frac{5}{3}$

$$\begin{array}{r|l} -\frac{1}{3} & \frac{5}{3} \\ \hline b & = 1 \end{array}$$

cut

$$\frac{5}{3} - \frac{1}{3} = \frac{4}{3}$$

$$\frac{4}{3} - \frac{1}{3} = \frac{3}{3} = 1$$

Is each number a solution of the given inequality?

1. $x \leq -8$

a. -10

① $x \leq -8$

$-10 \leq -8$ True

2. $0.65 \geq y$

a. 0.43

② $0.65 \geq y$

$0.65 \geq 0.43$ TRUE

3. $2y + 1 > -5$

a. -4

③ $2y + 1 > -5$

$2(-4) + 1 > -5$

$-8 + 1$

$-7 > -5$

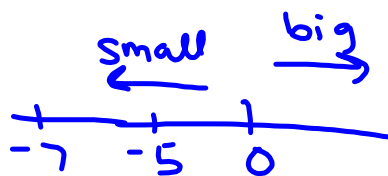
False

4. $7x - 14 \leq 6x - 16$

a. 0

7. $n(n - 6) \geq -4$

a. 3



④ $7x - 14 \leq 6x - 16$

~~$7 \cdot 0 - 14 \leq 6 \cdot 0 - 16$~~

$-14 \leq -16$ False

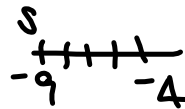
⑦ $n(n - 6) \geq -4$

$3(3 - 6) \geq -4$

$9 - 18$

$-9 \geq -4$

False



18) at or below

$$x \leq 38$$

19) max.

$$x \leq 2000$$

20) at least

$$x \geq 20$$

$> \geq \leq <$

21) max
 $x \leq 250$

22) at least

$$x \geq 9$$

2.2 Solving One Step Inequalities

Addition Property of Inequalities

Is $5 < 8$ true?

yes

$$5 + 1 < 8 + 1$$

$6 < 9$ still true

Adding a number
to both

sides keeps ~~it~~ it

true

Subtraction Property of Inequalities

Is $-3 \leq 4$ true?

Yes

$$-3 - 5 \leq 4 - 5$$

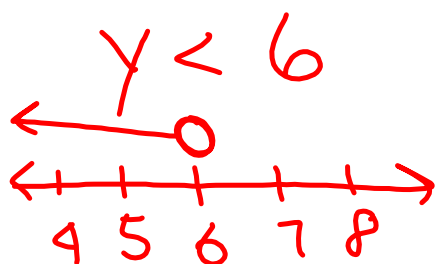
$$-8 \leq -1 \quad \checkmark$$

If you subtract a
number to both
sides it stays true

Ex 1 Solve

$$a) \quad y - 2 < 4$$

~~+2~~ +2

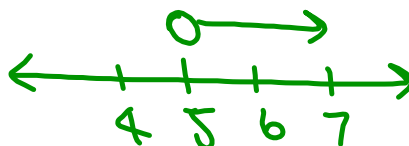


$$b) \quad 7 < w + 2$$

~~-2~~ ~~-2~~

$$5 < w$$

$$w > 5$$

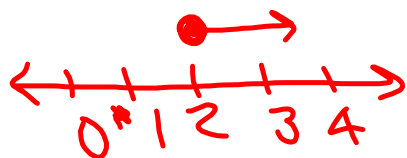


Ex 2 Solve

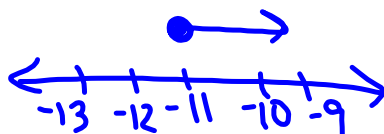
a) $10 \leq y + 8$
 $-8 \quad -8$

$2 \leq y$

$y \geq 2$



b) $f - 4 \geq 15$
 $+4 \quad +4$
 $f \geq -11$



CW Solve & Graph

1) $x - 4 < 1$

5) $b + 3 < 8$

2) $x - 6 > 10$

6) $-4 + h \geq -13$

3) $4 + h \leq 7$

7) $x - 3 < 4$

4) $b + d < 11$

8) $x + 35 \geq 75$

Rewrite: 9) $5 \leq x$

10) $1.5 < y$