

JANUARY 7, 2015 ^{1ST} _{2ND}

STARTER

Scrat gathered a total of 100 acorns in 5 days. Each day he gathered 6 more acorns than the day before. How many did he gather on the first day?



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1/7 - Solving One-Step Multiply/Divide Inequalities

Sometimes the inequality needs to switch...

$$5 < n \text{ becomes } n > 5$$

There are 2 other times...

When you **multiply** both sides by a negative number,
switch the inequality sign!

$$2 < 3 \quad \textit{right?}$$

$$-1 \cdot 2 < 3 \cdot -1 \quad \textit{times both sides by } -1$$

$$-2 < -3 \quad \textit{WRONG!}$$

$$-2 > -3 \quad \textit{Switch the inequality sign}$$

Examples of the first kind:
Flip the inequality symbol
since the pink 2's are negative

$$-2 \cdot \frac{n}{2} < 4 \cdot -2$$
$$n > -8$$

Do NOT switch since
the GREEN 4 is positive

$$4 \cdot \frac{d}{4} \leq -10 \cdot 4$$
$$d \leq -40$$

$$-5 \cdot \frac{c}{-5} \geq -8 \cdot -5$$
$$c \leq 40$$

$$-3 \cdot 6 > \frac{x}{-3} \cdot -3$$
$$-18 < x$$
$$x > -18$$

Here is the second time:

When you **divide** both sides by a negative number,
switch the inequality sign!

$$-4 < 6 \quad \textit{right?}$$

$$\frac{-4}{-2} < \frac{6}{-2} \quad \textit{divide both sides by } -2$$

$$2 < -3 \quad \textit{WRONG!}$$

$$2 > -3 \quad \textit{Switch the inequality sign}$$

More examples:
Switch because the Red 2
is negative.

$$\frac{-2n}{-2} > \frac{6}{-2}$$
$$n < -3$$

$$\frac{6x}{6} \geq \frac{-24}{6}$$
$$x \geq -4$$

$$\frac{18}{-3} \leq \frac{-3c}{-3}$$
$$-6 \geq c$$
$$c \leq -6$$

$$\frac{-20}{4} < \frac{4d}{4}$$
$$-5 < d$$
$$d > -5$$

Change the inequality sign when:

1. you exchange sides
2. you multiply both sides by a negative number
3. you divide both sides by a negative number

↳ When the "Alexus #" is negative!

HOMEWORK

Green WS 3

DUE Thursday