Solving for $x$: Lesson 10

# Linear Inequalities: Notes

Name: _____

**Why we must flip an inequality sign:**

| | $1<3$ | True? |
|---|---|---|
| Add 4 to both sides: | | |
| Subtract 2 from both sides: | | |
| Multiply both sides by 2: | | |
| Multiply both sides by -5: | | |

**Steps in solving linear inequalities:**

1. Solve normally, copying the _____ sign as you go.
2. If you _____ or _____ by a _____ number, _____ the inequality sign.

**Solve:** $-4y+35 \geq 3$

**Flip or No Flip?**

$6b < -30$ _____

$d+10 \geq 13$ _____

$\frac{e}{-3} \leq 7$ _____

$f-2 < 5$ _____

$-g \geq 9$ _____

$\frac{h}{2}+7 > 2$ _____

$-8i-2 \geq 11$ _____

**Solve two ways:**

$-2w-5 < 4w-17$

$-2w-5 < 4w-17$