Solving Equations Revisited Name _____

Algebra Foundations Assignment # ____

1. *7a + 5 = 40*

2. $\frac{y}{6}+8=11$

3. *6x + 32 = 50*

4. *4x – 6 = 42*

5. *9x – 12 = 24*

6. *–7x – 6 = 8*

7. $\frac{x}{8}-5=4$

8. *–3x + 5 = –16*

9. *–5x + 14 = –21*

Solve a two-step inequality

Example: $4y + 10 < 18$ ---*original inequality*

$4y + 10 - 10 < 18 - 10$ ---*subtract 10 from both sides*

$4y < 8$ ---*simplify*

$\frac{4y}{4} < \frac{8}{4}$ ---*divide each side by 4*

$y < 2$ ---*simplify*

Solve a two-step inequality

Example: $-3x + 10 < 31$ ---*original inequality*

$-3x + 10 - 10 < 31 - 10$ ---*subtract 10 from both sides*

$-3x < 21$ ---*simplify*

$\frac{-3x}{-3} > \frac{21}{-3}$ ---*divide each side by –3 and* ***flip*** *the inequality symbol*

$x > -7$ ---*simplify*

Remember:

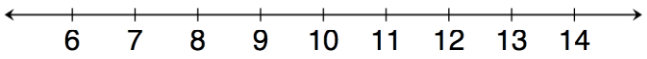
● (*closed circle*) *goes with* $\leq$ *and* $\geq$

○ (*open circle*) *goes with* $<$ *and* $>$

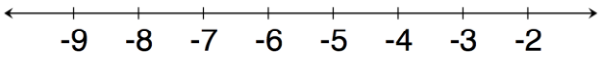
Flip *the inequality only if you multiply or divide by a negative.*

Solve the inequality. Then graph the solution.

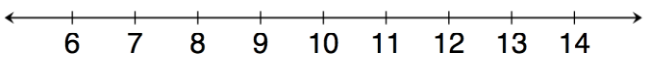
10. $4y + 6 < 38$



11. $-2p + 4 \geq 14$



12. $3n - 6 > 18$



13. $-2x + 1 < 15$