Name _____ Date _____ Class _____

LESSON 12-7

# Reteach

## Solving Two-Step Inequalities

Two-step inequalities can be solved by first undoing addition or subtraction, then undoing multiplication or division.

Remember to reverse the inequality symbol if you multiply or divide by a negative number.

**Complete the steps to solve the inequality. Then graph the solution set.**

**1.** $-3x + 35 > -10$

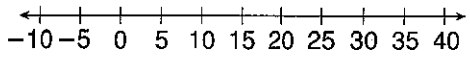
$-3x + 35$ _____ $> -10$ _____ ← First undo addition or subtraction.

$-3x >$ _____ ← Then undo multiplication or division.

$\frac{-3x}{-3} \square \frac{\quad}{-3}$ ← Divide by $-3$. The inequality symbol is reversed.

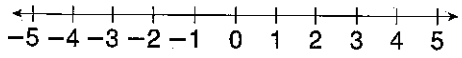
$x \square$ _____

Graph the inequality.

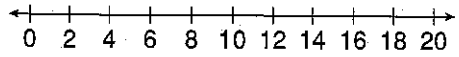



**Solve. Then graph each solution set.**

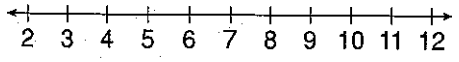
**2.** $7x + 32 < 18$ _____



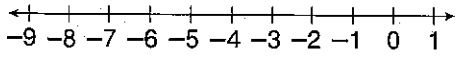

**3.** $\frac{t}{4} - 8 \leq -5$ _____



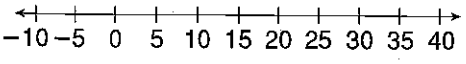

**4.** $6f - 6 > 48$ _____



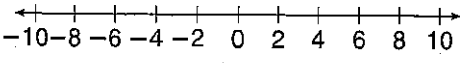

**5.** $-4w - 13 \geq 15$ _____




**6.** $\frac{k}{-5} - 6 < -9$ _____




**7.** $7 - 2p > -5$ _____



Name _____ Date _____ Class _____

LESSON 12-7

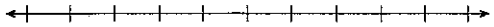
# Practice A

## *Solving Two-Step Inequalities*

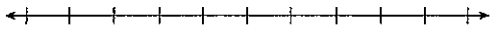
**Solve. Cross out each inequality in the box that matches a solution. Then graph each solution set.**

| | | | | | |
|---|---|---|---|---|---|
| $x > 8$ | $x < -8$ | $x \geq -8$ | $x < 8$ | $x \geq 8$ | $x \leq -8$ |

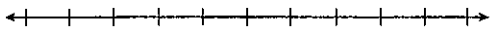
**1.** $3x - 5 < 19$ _____



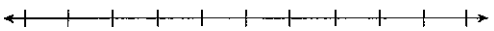
**2.** $-2x + 12 < -4$ _____



**3.** $\frac{x}{4} + 7 \geq 9$ _____

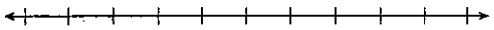


**4.** $\frac{x}{-2} - 3 \geq 1$ _____

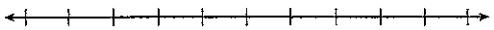


**Solve. Then graph each solution set.**

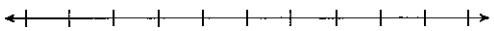
**5.** $7y - 8 > 6$ _____



**6.** $-4d + 15 \leq -1$ _____



**7.** $\frac{r}{-6} + 5 < 7$ _____



Name _____ Date _____ Class _____

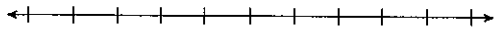
LESSON 12-7

# Practice B

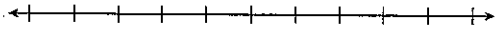
## *Solving Two-Step Inequalities*

**Solve. Then graph each solution set on a number line.**

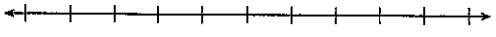
**1.** $5x - 8 < 17$ _____



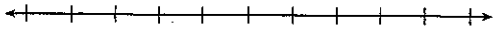
**2.** $\frac{r}{3} + 5 \geq 9$ _____



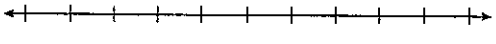
**3.** $-4n + 8 < -4$ _____



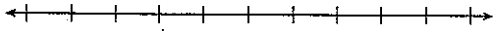
**4.** $\frac{z}{7} - 6 \geq -5$ _____



**5.** $\frac{w}{-5} + 4 < 9$ _____



**6.** $\frac{u}{2} - 5 \leq -9$ _____



**Solve.**

**7.** $-7d + 8 > 29$

_____

**8.** $4g - 18 \leq -2$

_____

**9.** $12 - 3b < 9$

_____

**10.** $\frac{a}{-4} - 7 < -2$

_____

**11.** $9 + \frac{c}{6} \leq 17$

_____

**12.** $-\frac{2}{3}p - 8 \geq 4$

_____

Name _____ Date _____ Class _____

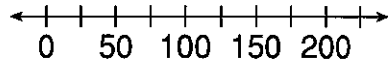
LESSON 12-7

# Puzzles, Twisters & Teasers

## *1-800-HELP!*

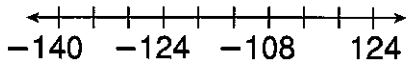
**Solve each inequality. Graph each solution set on the number line. Then use the letter next to your answer to solve the riddle.**

**1.** $\frac{x}{5} - 6 < 19$



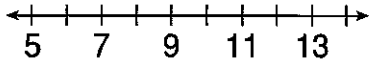

With what number did you start the graph? _____ = **H**

**2.** $\frac{y}{6} + 5 \leq -13$



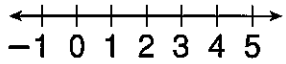

Is your circle open or closed? _____ = **E**

**3.** $-8x + 5 \leq -51$



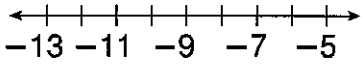

With what number did you start? _____ = **I**

**4.** $5y - 4 > -9$



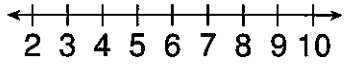

Is your circle open or filled? _____ = **B**

**5.** $\frac{x}{-3} + 8 > 11$




Is it possible for the solution to include −9? _____ = **N**

**6.** $7y - 6 \geq 22$




Is it possible for the solution to include 4? _____ = **L**

**Why were the alien's eyes so big?**

He saw his P ___ O ___ ___

125 no ●

___ ___ L ___

O 7 yes