Name _____ Class _____ Date _____

3-3 Practice *Form K*

Solving Inequalities Using Multiplication or Division

State what number you would multiply or divide each side of the inequality by to solve the inequality.

1. $2x < 2$ **divide by 2**

2. $3 > -3a$ **divide by −3**

3. $6.2 \leq 3.1c$ **divide by 3.1**

4. $\frac{w}{3} \geq \frac{7}{3}$ **multiply by 3**

5. $\frac{i}{5} \geq -3$ **multiply by 5**

6. $2 \leq \frac{s}{4}$ **multiply by 4**

Solve each inequality. Graph and check your solution. The first step is started for you.

7. $\frac{x}{3} > -1$

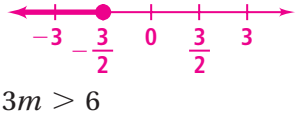
$\boxed{3}\left(\frac{x}{3}\right) > \boxed{3}(-1)$

$x > -3$

8. $1 \leq -\frac{2}{3}y$

$\boxed{-\frac{3}{2}}(1) \ \boxed{\geq} \ \boxed{-\frac{3}{2}}\left(-\frac{2}{3}y\right)$

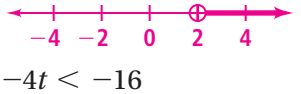
$-\frac{3}{2} \geq y$



9. $3m > 6$

$\frac{3m}{\boxed{3}} > \frac{6}{\boxed{3}}$

$m > 2$



10. $-4t < -16$

$\frac{-4t}{\boxed{-4}} \ \boxed{>} \ \frac{-16}{\boxed{-4}}$

$t > 4$

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Name _____ Class _____ Date _____

3-3 Practice (continued) *Form K*

Solving Inequalities Using Multiplication or Division

Write four solutions of each inequality.

11. $-3.0 > 6p$ **Possible answers: −1, −2, −3, −4**

12. $0.25 < \frac{1}{4}r$ **Possible answers: 2, 3, 4, 5**

13. A company sells parts in both the United States and in Europe. The company must report its product's size in both the metric system and in inches. If a product is reported to be no more than 12 inches long, how long is it in centimeters? Assume 1 inch $=$ 2.54 cm. **no more than 30.48 cm**

Let $x =$ the length of a product in inches.

14. You want to see if you are really saving money each month by exclusively using your cell phone for all long distance calls. Long distance calls cost $.03 per minute on your cell phone. The basic plan for your cell phone is $30 each month. The cost of regular phone service with unlimited long distance is $40. Write and solve an inequality to find the number of long-distance call minutes you may make and still save money.

$0.03x + 30 < 40$; $x < 333.\overline{3}$; You may make up to 333 minutes of long-distance calls and save money.

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