Name _____ Class _____ Date _____

3-2 Practice *Form K*

Solving Inequalities Using Addition or Subtraction

State what number you would add to or subtract from each side of the inequality to solve the inequality.

1. $x - 3 < 0$ **add 3**

2. $3 > -\frac{1}{5} + a$ **add $\frac{1}{5}$**

3. $6.2 \leq c - 3.1$ **add 3.1**

4. $w + \frac{1}{3} \geq \frac{7}{3}$ **subtract $\frac{1}{3}$**

5. $m + 2 \geq 0$ **subtract 2**

6. $2 \leq \frac{1}{4} + s$ **subtract $\frac{1}{4}$**

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

7. $y - 3 < 0$

$y - 3 \boxed{+} 3 < 0 \boxed{+} 3$

$y < 3$

8. $4 \geq c + 2$

$4 \boxed{-} 2 \geq c + 2 \boxed{-} 2$

$2 \geq c$

9. $\frac{1}{3} + f > -\frac{2}{3}$

$\frac{1}{3} \boxed{-} \frac{1}{3} + f > -\frac{2}{3} \boxed{-} \frac{1}{3}$

$f > -1$

Name _____ Class _____ Date _____

3-2 Practice (continued) *Form K*

Solving Inequalities Using Addition or Subtraction

Solve each inequality. Justify each step.

10. $-g - 2 + 2g > 4$

$-g + 2g - 2 > 4$ Commutative Property of Addition
$g - 2 + 2 > 4 + 2$ Addition Property of Inequality
$g > 6$ Simplify.

11. $j + 1.1 \geq 2.3$

$j + 1.1 - 1.1 \geq 2.3 - 1.1$ Addition Property of Inequality
$j \geq 1.2$ Simplify.

12. A local television station sponsors a food drive. The goal is to donate more than 1000 canned goods. The station already has collected 400 canned goods. How many more canned goods does the television station need to meet its goal? Write and solve an inequality to find the number of canned goods needed.

Let f be how many more canned goods will come.

$f + 400 \boxed{>} 1000$

$f > 600$; more than 600

13. A family earns at most \$2500 a month. The family's monthly expenses are \$2000. Write and solve an inequality to find the possible amounts of money the family could save each month.

$x + 2000 \leq 2500$

$x \leq 500$; at most \$500