

Name _____ My Homework 1-14, 16, SR

Independent Practice Go online for Step-by-Step Solutions

Solve each inequality. Graph the solution set on a number line. (Examples 1-4)

1. $6x + 14 \geq 20$ $x \geq 1$

2. $4x - 13 < 11$ $x < 6$

3. $-20 > -2x + 4$ $x > 12$

$-20 > -2x + 4$
 $-4 \quad -4$
 $-24 > -2x$
 $-2 \quad -2$
 $12 < x$ or $x > 12$

4. $\frac{x}{13} + 3 \geq 4$ $x \geq 13$

5. Tyler needs at least \$205 for a new video game system. He has already saved \$30. He earns \$7 an hour at his job. Write and solve an inequality to find how many hours he will need to work to buy the system. Interpret the solution. (Example 5)

Inequality: $30 + 7x \geq 205$ Solution: $x \geq 25$ hours

Interpretation: He will have to work at least 25 hours.

MP Reason Abstractly Write and solve an inequality for each sentence.

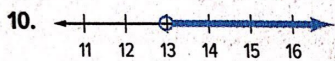
6. Three times a number increased by four is less than -62.
 $3x + 4 < -62$; $x < -22$

7. The quotient of a number and -5 increased by one is at most 7.
 $\frac{x}{-5} + 1 \leq 7$; $x \geq -30$

8. The quotient of a number and 3 minus two is at least -12.
 $\frac{x}{3} - 2 \geq -12$; $x \geq -30$

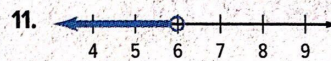
9. The product of -2 and a number minus six is greater than -18.
 $-2x - 6 > -18$; $x < 6$

Write a two-step inequality that could be represented by each number line.

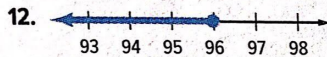


Sample answer: $4x + 1 > 53$

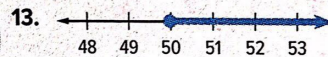
$-1 \quad -1$
 $4x > 52$
 $4 \quad 4$
 $x > 13$



Sample answer: $-2x + 5 > -7$



Sample answer: $2x - 6 \leq 186$



Sample answer: $\frac{x}{2} + 5 \geq 30$

H.O.T. Problems Higher Order Thinking

14. **MP Model with Mathematics** Write a real-world example that could be solved by using the inequality $4x + 8 \geq 32$. Then solve the inequality.

Sample answer: Felicia plans on spending at least \$32 on a new purse.

She has already saved \$8. If she earns \$4 an hour tutoring, how many

hours will she need to tutor to save at least \$32?; $x \geq 6$; at least 6 hours