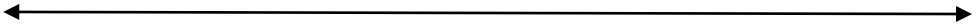
Interpreting Inequality Representations
Summative Assessment

NAME _____ DATE _____ PERIOD _____

Directions: Choose the problem(s) that could be represented by the inequality given. Justify your answer.

1. 

   a. $3x + 12 > 24$
   b. $-\frac{5}{6}x + 13\frac{1}{4} < 10\frac{3}{4}$
   c. $-7 + 5x > 18$

2. 

   a. $-14x - 32 \leq -18$
   b. $-32x - 59 \geq -27$
   c. $12x + 17 \leq 5$

3. 

a. Sara is selling magazine subscriptions and earns $4 for every subscription she gets. Sara also earns $20 per week regardless of how many magazine subscriptions she sells. If Sara wants to earn at least $85, what is the minimum number of subscriptions she needs to sell?

b. Jonathon has been taking piano lessons for four months. To achieve the next level in his piano class, Jonathon needs to master at least 42 songs. He has already mastered 8 songs. If Jonathon can master 2 songs per month, what is the minimum numbers of months it will take him to achieve the next level?

c. For every level that Xander completes in his favorite video, he earns 1,660 points. Xander already has 2,570 in the game and wants to end up with at least 52,000 points before he quits. What is the minimum number of complete levels that Xander needs to complete to reach his goal?

4. 

a. Martin wants to go roller skating. The roller skates rent for $4. Each hour of skate time costs $2. If Martin wants to spend no more than $12, how many hours can he skate?

b. Joree is having a Halloween party and wants to invite 11 of her friends. She only has $80 to spend. If she spends $25 on decorations, what is the most she can spend on each person at the party for snacks?

c. Juanita is ordering pizza. A large cheese pizza costs $11, and each ingredient costs $1.50. How many ingredients can she order if she wants to spend no more than $17?

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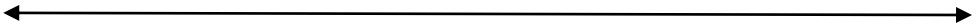
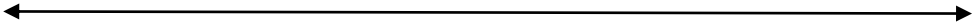
ANSWER KEY

1. 

$x > 4$

A. $3x + 12 > 24$

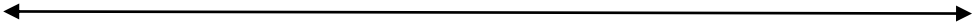
B. $-\frac{5}{6}x + 13\frac{1}{4} < 10\frac{3}{4}$

2. 

$x \leq -1$

B. $-32x - 59 \geq -27$

C. $12x + 17 \leq 5$

3. 

$x \geq 17$

Jonathon has been taking piano lessons for four months. To achieve the next level in his piano class, Jonathon needs to master at least 42 songs. He has already mastered 8 songs. If Jonathon can master 2 songs per month, what is the minimum numbers of months it will take him to achieve the next level? $8 + 2x \geq 42$

$x \geq 17$

4. 

$x \leq 4$

Martin wants to go roller skating. The roller skates rent for $4. Each hour of skate time costs $2. If Martin wants to spend no more than $12, how many hours can he skate?

$4 + 2x \leq 12$

$x \leq 4$

Juanita is ordering pizza. A large cheese pizza costs $11, and each ingredient costs $1.50. How many ingredients can she order if she wants to spend no more than $17?

$11 + 1.50x \leq 17$

$x \leq 4$