Lesson 10 Practice Problems

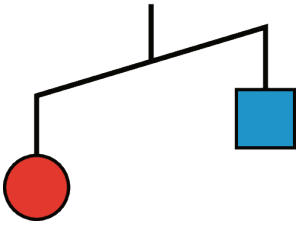
1. There is a closed carton of eggs in Mai's refrigerator. The carton contains e eggs and it can hold 12 eggs.

   a. What does the inequality $e < 12$ mean in this context?

   b. What does the inequality $e > 0$ mean in this context?

   c. What are some possible values of e that will make both $e < 12$ and $e > 0$ true?

2. Here is a diagram of an unbalanced hanger.



   a. Write an inequality to represent the relationship of the weights. Use s to represent the weight of the square in grams and c to represent the weight of the circle in grams.

   b. One red circle weighs 12 grams. Write an inequality to represent the weight of one blue square.

   c. Could 0 be a value of s? Explain your reasoning.

3. a. Jada is taller than Diego. Diego is 54 inches tall (4 feet, 6 inches). Write an inequality that compares Jada's height in inches, j, to Diego's height.

   b. Jada is shorter than Elena. Elena is 5 feet tall. Write an inequality that compares Jada's height in inches, j, to Elena's height.

(From Unit 7, Lesson 8.)

4. Tyler has more than $10. Elena has more money than Tyler. Mai has more money than Elena. Let t be the amount of money that Tyler has, let e be the amount of money that Elena has, and let m be the amount of money that Mai has. Select **all** statements that are true:

   A. $t < j$

   B. $m > 10$

   C. $e > 10$

   D. $t > 10$

   E. $e > m$

   F. $t < e$

5. Which is greater, $\frac{-9}{20}$ or -0.5? Explain how you know. If you get stuck, consider plotting the numbers on a number line.

(From Unit 7, Lesson 3.)

6. Select **all** the expressions that are equivalent to $\left(\frac{1}{2}\right)^3$.

   A. $\frac{1}{2} \cdot \frac{1}{2} \cdot \frac{1}{2}$

   B. $\frac{1}{2^3}$

   C. $\left(\frac{1}{3}\right)^2$

   D. $\frac{1}{6}$

   E. $\frac{1}{8}$

(From Unit 6, Lesson 13.)