

NAME

DATE

PERIOD

## Unit 6, Lesson 16: Interpreting Inequalities

1. Priya looks at the inequality  $12 - x > 5$  and says “I subtract a number from 12 and want a result that is bigger than 5. That means that the solutions should be values of  $x$  that are smaller than something.”

Do you agree with Priya? Explain your reasoning and include solutions to the inequality in your explanation.

2. When a store had sold  $\frac{2}{5}$  of the shirts that were on display, they brought out another 30 from the stockroom. The store likes to keep at least 150 shirts on display. The manager wrote the inequality  $\frac{3}{5}x + 30 \geq 150$  to describe the situation.

- Explain what  $\frac{3}{5}$  means in the inequality.
- Solve the inequality.
- Explain what the solution means in the situation.

3. You know  $x$  is a number less than 4. Select **all** the inequalities that *must* be true.

- $x < 2$
- $x + 6 < 10$
- $5x < 20$
- $x - 2 > 2$
- $x < 8$

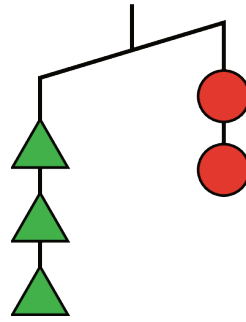
(from Unit 6, Lesson 13)

4. Here is an unbalanced hanger.

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- a. If you knew each circle weighed 6 grams, what would that tell you about the weight of each triangle? Explain your reasoning.
- b. If you knew each triangle weighed 3 grams, what would that tell you about the weight of each circle? Explain your reasoning.

(from Unit 6, Lesson 13)

5. At a skateboard shop:

- a. The price tag on a shirt says \$12.58. Sales tax is 7.5% of the price. How much will you pay for the shirt?
- b. The store buys a helmet for \$19.00 and sells it for \$31.50. What percentage was the markup?
- c. The shop pays workers \$14.25 per hour plus 5.5% commission. If someone works 18 hours and sells \$250 worth of merchandise, what is the total amount of their paycheck for this pay period? Explain or show your reasoning.

(from Unit 4, Lesson 12)