

Name: \_\_\_\_\_

# Test 3: Unit 4 & 5

## Constructed Response

### Constructed Response – Inequalities

**Each student was given his/her category averages from Skyward (test average, assignment average, and quiz average).**

**What must you score on your midterm exam to get a report card grade that is between 85 and 90?**

- A. Write a compound inequality to represent the situation. Let  $m$  represent the grade on the midterm exam.
- B. Solve your compound inequality from part A. Show all work.
- C. Explain what your solution to part B means.

### Constructed Response

- A. Kylie and Rhoda are solving the equation  $4(x - 8) = 7(x - 4)$ . Kylie uses a first step that results in  $4x - 32 = 7x - 28$ . Rhoda uses a first step that results in  $4x - 8 = 7x - 4$ . Identify which person was correct, and what that person did to arrive at their answer.
- B. Darlene is collecting prize tickets. The equation  $y = 2x + 1$  describes the relationship between the number of days ( $x$ ) since she began collecting and the number of prize tickets ( $y$ ) she has collected. Which statement correctly describes a solution of the equation? Explain how you arrived at your solution.
- A. Darlene has collected 2 prize tickets at the end of 1 day.
  - B. Darlene has collected 4 prize tickets at the end of 9 days.
  - C. Darlene has collected 22 prize tickets at the end of 10 days.
  - D. Darlene has collected 25 prize tickets at the end of 12 days.
- C. Sarah is measuring the growth of two different plants, Plant A and Plant B. Plant A was 2 inches tall when she measured it, and it continued to grow 0.18 inches per day. Plant B was 1 inch tall, and grew 0.25 inches per day. After how many days will Plant A and Plant B be the SAME height? Show and explain your work
- D. Michael went to the mall and purchased 4 polos and 3 pairs of khakis to correctly adhere to the Hazleton Area School District's dress code. The khaki's cost \$32 per pair. The total of his purchase was \$206. Write an equation modeling the situation. Find the price of one polo.

# Unit 4

## Constructed-Response Review

Read the problem. Write your answer for each part.

1. Two inequalities are shown below.

$$-26 < 4k - 2 \qquad 2k - 1 < 5$$

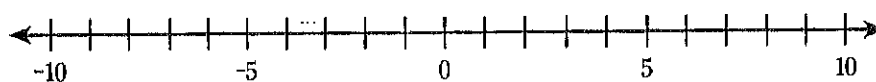
- A Write a compound inequality to combine the inequalities above.

Answer: \_\_\_\_\_

- B Solve your compound inequality for values of  $k$ . Show your work.

Answer: \_\_\_\_\_

- C Graph your solution on the number line below.



Read the problem. Write your answer for each part.

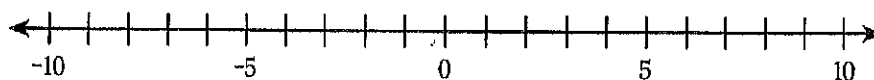
2. Paul is going to solve the inequality shown below. In the inequality,  $w$  represents the width of a rectangle.

$$|4 - 3w| \geq 8$$

- A Solve the inequality. Show your work.

Answer: \_\_\_\_\_

- B Graph the solution to the inequality on this number line.



- C Paul says that  $w = -3$  is a reasonable solution to the inequality. Explain why Paul thinks that, but also explain why he is incorrect in this situation.

**CONSTRUCTED-RESPONSE ITEM**

14. Kyle has \$4 more than twice as much money as Lana. Lana has  $x$  dollars. Kyle does not have enough money to buy a video game that costs \$56, but he has enough money to buy a textbook that costs \$38.

- A. Write a compound inequality that represents all the possible amounts of money Kyle could have in terms of  $x$ .

compound inequality: \_\_\_\_\_

- B. What is the **least** amount of money Lana could have?

\$ \_\_\_\_\_

Go to the next page to finish question 14.

GO ON 

14. **Continued.** Please refer to the previous page for task explanation.

Lana has a whole number of dollars.

- C. List the different possible amounts of money, in dollars, Lana could have.

different possible amounts: \_\_\_\_\_

**AFTER YOU HAVE CHECKED YOUR WORK, CLOSE YOUR ANSWER  
BOOKLET AND TEST BOOKLET SO YOUR TEACHER WILL KNOW  
YOU ARE FINISHED.**

