

Unit 6 Constructed-Response Review

Read the problem. Write your answer for each part.

1. There is a linear relationship between the number of people in a group and the cost to enter a museum. The museum charges \$20 for two people and \$28 for three people.
A Write the equation in slope-intercept form that relates the number of people in a group to the cost of entering the museum. Show your work.

Answer: _____

- B How much will it cost for a single individual to enter the museum?

Answer: _____

- C How many people can enter the museum for \$100?

Answer: _____

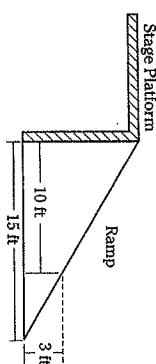
Unit 6 Coordinate Geometry

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Read the problem. Write your answer for each part.

2. The bottom of a ramp is placed 15 feet from the edge of a stage platform. The ramp is 3 feet off the ground when it is 10 feet from the edge of the stage.



- A What is the slope of the ramp? Show your work.

Answer: _____

- B How many feet off the ground is the top of the ramp?

Answer: _____

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Unit 6 Coordinate Geometry

C Write a linear equation in slope-intercept form that represents the height (y) of the ramp at any distance (x) from the stage.

Answer: _____

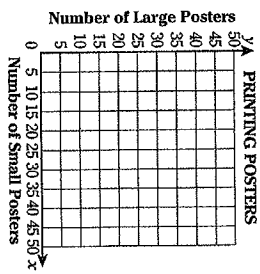
Read the problem. Write your answer for each part.

3. Ashley is the manager of a theater. She has \$240 to spend on posters to advertise a new play. Ashley can spend exactly \$240 to print 48 small posters. She can also spend exactly \$240 to print 30 large posters.

A Write an equation that can be used to find all combinations of small posters (x) and large posters (y) that will cost exactly \$240.

Answer: _____

B Graph your equation from part A below.



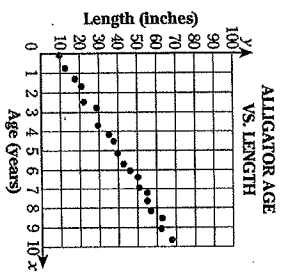
C. What is the slope of the line you graphed in part B?

Answer: _____

D. Explain what the slope from part C means in this situation.

Read the problem. Write your answer for each part.

4. The scatter plot below shows the age and length of 20 alligators.



A. Draw the line of best fit on the scatter plot above.

B. Write an equation that describes the line of best fit.

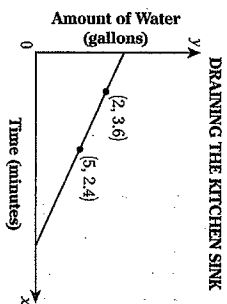
Answer: _____

C. Explain how you found your equation in part B.

D. Explain the meaning of the slope of the line in this situation.

Read the problem. Write your answer for each part.

5. A kitchen sink is draining very slowly. The graph shows how the amount of water in the sink is changing over time.



- A Find the slope of the line in the graph.

Answer: _____

- B Write an equation of the line in point-slope form.

Answer: _____

- C Find the x - and y -intercepts of the line.

Answer: _____ and _____

- D Explain the meaning of the x - and y -intercepts in this situation.

Read the problem. Write your answer for each part.

6. Neil gets in an elevator at the 30th floor, and it begins to move downward at a speed of 8 feet per second. After 12 seconds, the elevator is 240 feet above the ground.

- A Let y = the height in feet of the elevator x seconds after Neil got in. Write an equation to show the relationship between x and y .

Answer: _____

- B Explain how you found your equation in part A.

- C Use your equation to find the height of the elevator when Neil got in.

Answer: _____

- D Use your equation to find how long it will take the elevator to reach ground level.

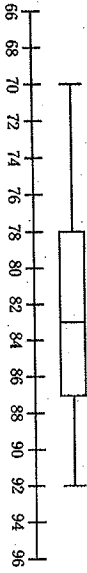
Answer: _____

Unit 7

Constructed-Response Review

Read the problem. Write your answer for each part.

1. The box-and-whisker plot below shows students' scores on a practice driving test.



- A What is the range of the scores?

Answer: _____

- B What is the interquartile range?

Answer: _____

- C If the plot represents 64 students, about how many scored above the third quartile?

Answer: _____

- D A passing score is 80. Explain how you know whether or not 50% of the students passed the test.

Read the problem. Write your answer for each part.

2. Isaac's bowling scores for April are shown below. His mean score after all five games was 221.

ISAAC'S BOWLING SCORES

Game	1	2	3	4	5
Score	225	245	222	230	?

- A What was Isaac's score in game 5?

Answer: _____

- B What was Isaac's median score for the five games?

Answer: _____

- C Isaac bowled a sixth game and his median score changes to 227.
What is Isaac's score on the sixth game?

Answer: _____

- D Explain how you know your answer to part C is correct.

Read the problem. Write your answer for each part.

3. Britney randomly selected 30 cars in a parking lot and determined each car's year of manufacture. She made this stem-and-leaf plot to show the results.

CARS IN PARKING LOT—YEAR OF MANUFACTURE

197	1
198	2 6
199	3 4 5 5 7 7 8 9 9
200	1 2 4 5 5 6 7 7 8 9 9
201	0 0 1 1 2 2 2

Key: 197 | 1 = 1971

- A. There are about 70,000 cars in the city where Britney lives. According to Britney's data, about how many of the cars in her city were manufactured before the year 2000?

Answer: _____

- B. Find the lower quartile and upper quartile of the data.

Answer: _____

- C. About how many of the cars in Britney's city were manufactured between the years you found in part B?

Answer: _____

- D. Explain how you found your answer to part C.

MODULE 2: Linear Functions and Data Organizations

Keystone Exams: Algebra I

Standard A1.2.2

Alava is traveling on a train.

The train is going at a constant speed of 80 miles per hour.

A. How many hours will it take for the train to travel 1,120 miles?

hours: _____

Alava also considered taking an airplane. The airplane can travel the same 1,120 miles in 12 hours less time than it takes the train.

B. What is the speed of the airplane in miles per hour (mph)?

speed of the airplane: _____ mph

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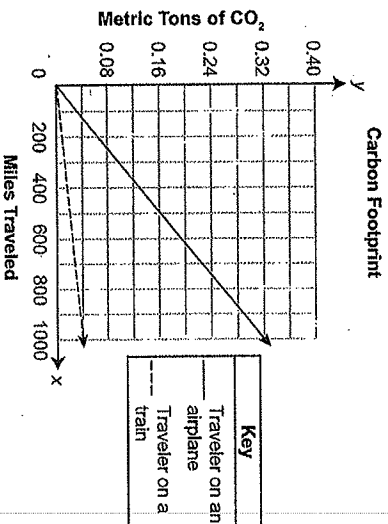
NAME _____ PD _____

Keystone Exams: Algebra I

MODULE 2: Linear Functions and Data Organizations

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

Alava is very concerned about the environment. The graph below displays the carbon dioxide (CO_2) in metric tons, for each traveler on an airplane and each traveler on a train.



C. What equation could be used to find the metric tons of CO_2 produced (y) by a traveler on an airplane for x miles traveled?

equation: _____

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Algebra 1 – WH
Open-ended HW Practice

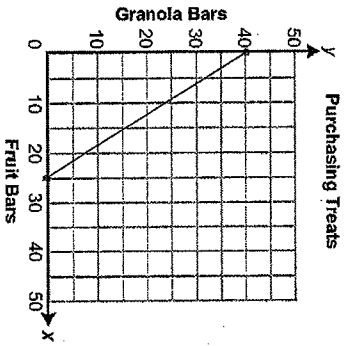
name _____
date _____ Period _____

Georgia is purchasing treats for her classmates. Georgia can spend exactly \$10.00 to purchase 25 fruit bars, each equal in price. Georgia can also spend exactly \$10.00 to purchase 40 granola bars, each equal in price.

- A. Write an equation which can be used to find all combinations of fruit bars (x) and granola bars (y) that will cost exactly \$10.00.

equation: _____

- B. Graph the equation from part A below.



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

- C. What is the slope of the line graphed in part B?

slope: _____

- D. Explain what the slope from part C means in the context of Georgia purchasing treats.