ICAHN CHARTER SCHOOL 5

8th GRADE WINTER BREAK PACKET

Due February 24th, 2020

Name:_____

Parent Signature:_____

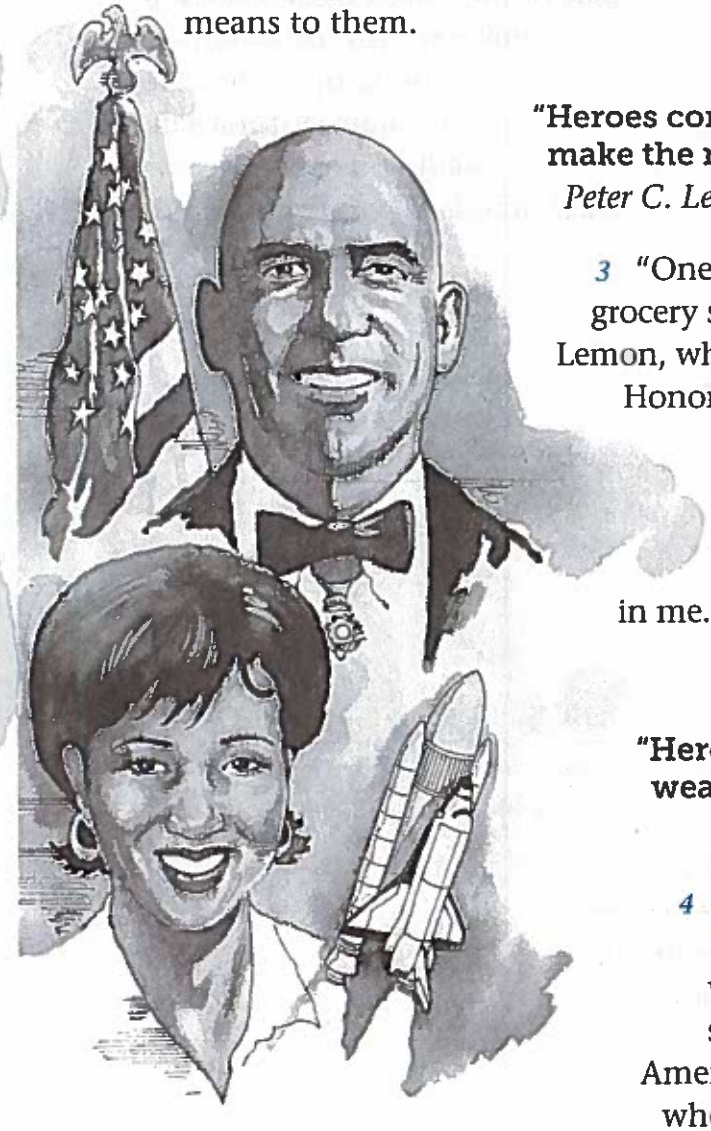
Completion of this packet is mandatory. It will be graded as a full assignment in each course on the next progress report.

Who Is a Hero?

By Marty Kaminsky

1 The word *hero* means different things to different people. For some, it's the fire fighter who enters a burning building to save lives. For others, it's the baseball player who clears the bases with a game-winning home run.

2 Recently I spoke with some well-known people who have done heroic things or have witnessed heroic actions by others. I asked what the word *hero* means to them.

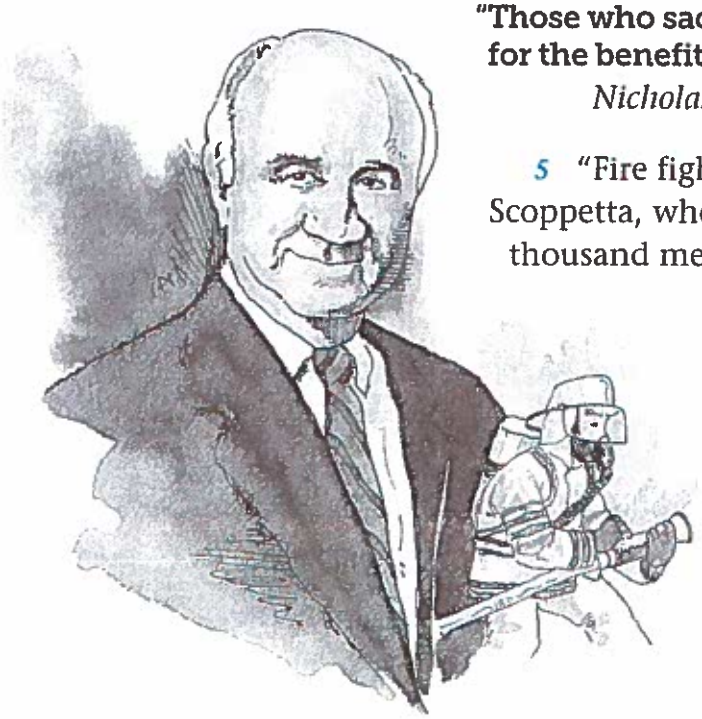


"Heroes conduct themselves with honor and make the right choices day after day."
Peter C. Lemon, Congressional Medal of Honor recipient

3 "One of my heroes was the man who owned the grocery store where I worked as a teenager," says Mr. Lemon, who was awarded the Congressional Medal of Honor for his actions in defending fellow soldiers during the Vietnam War. "He was honest, hard-working, and treated people with dignity. Another was my lieutenant at Army basic training, because he believed in me. These men didn't focus on themselves, but encouraged others to believe in themselves."

"Heroes are those who recognize their weaknesses and do something about them."
Dr. Mae Jemison, former astronaut

4 "I don't like the term hero. It implies that some people are perfect and have no weaknesses, but we all have shortcomings," says Dr. Jemison, who was the first African American female astronaut. "Heroes are people who fail but stand back up again. We all have the material of heroes inside us. By using the example of others you look up to, you can fan the flames of inspiration and find the hero in yourself."



"Those who sacrifice, take risks, or do the extraordinary for the benefit of others can be heroes."
Nicholas Scoppetta, New York City fire commissioner

5 "Fire fighters do not set out to be heroes," says Mr. Scoppetta, who commands a team of more than sixteen thousand men and women. "When they take the oath of office, fire fighters realize they may be placing themselves in danger, but it is part of the job. A person does not have to rush into a burning building to be a hero, though. Author Ralph Waldo Emerson once said, 'Each man is a hero to somebody.'"

"Heroes come in all shapes and sizes."
Sue Bird, professional basketball player

6 "When I was growing up, there were very few female athletes to look up to, so I copied my sister, Jen," says Ms. Bird. "She excelled because she gave it her best at all times. It is important to realize that both males and females can inspire and lead the way for others."

7 In 2002, Sue Bird led the University of Connecticut's women's basketball team to the national championship. She now plays in the Women's National Basketball Association.

"Look for the people who are doing something for someone else."
Dan Rather, television journalist

8 "My heroes were my parents," says Mr. Rather, who has reported on most of the major news stories of the past forty years. "They worked with determination and heart to make sure my brothers, sisters, and I had what we needed. They impressed upon us that we were a family, a team, not just a collection of people who lived under the same roof.

9 "Having the biggest car, the most money, or the nicest house does not make you a hero. Heroism comes from within. There are heroes all around us—you just have to know how to look for them."

"A hero is someone like my parents, who give something back to others and ask for nothing in return."
Derek Jeter, professional baseball player

10 "Right from the start, my parents told my sister and me that we could be successful and then they showed us how," says Mr. Jeter, the star shortstop for the New York Yankees. "After my Little League games my dad would take me to the high-school field and hit me extra grounders and then pitch to me. My mom and sister would patiently field the balls I hit. My parents taught me that there may be people with more talent, but there is never an excuse for anyone to work harder than I do."

11 Derek Jeter is the founder and president of the Turn 2 Foundation, which inspires kids to become leaders.

Directions: Use "Washington" to answer the following questions. If you need more space to write an answer, write your answer on your own paper.

111 What is the main purpose of the first paragraph?

- **A** to compare Washington to other leaders
- **B** to argue that Washington was a great man
- **C** to describe how most people view Washington
- **D** to give facts about Washington's achievements

112 In paragraph 5, the phrase "iron will" refers to Washington's

- **A** physical strength
- **B** unsympathetic nature
- **C** stern leadership style
- **D** discipline and self-control

113 Read this sentence from paragraph 8.

> ***"He always looked facts squarely in the face and dealt with them as such, dreaming no dreams, cherishing no delusions, asking no impossibilities,—just to others as to himself, and thus winning alike in war and in peace."***

This sentence mainly argues that Washington was

- **A** rational
- **B** patient
- **C** cautious
- **D** confident

114 The article can be described as having an unbalanced view of Washington. Describe two ways the balance of the article could be improved.

Directions: Use "Who Is a Hero?" to answer the following questions. If you need more space to write an answer, write your answer on your own paper.

115 The quotes from the people interviewed suggest that heroes do not have to make great achievements. How do the choices of the people interviewed contradict this idea? Use details from the article to explain your answer.

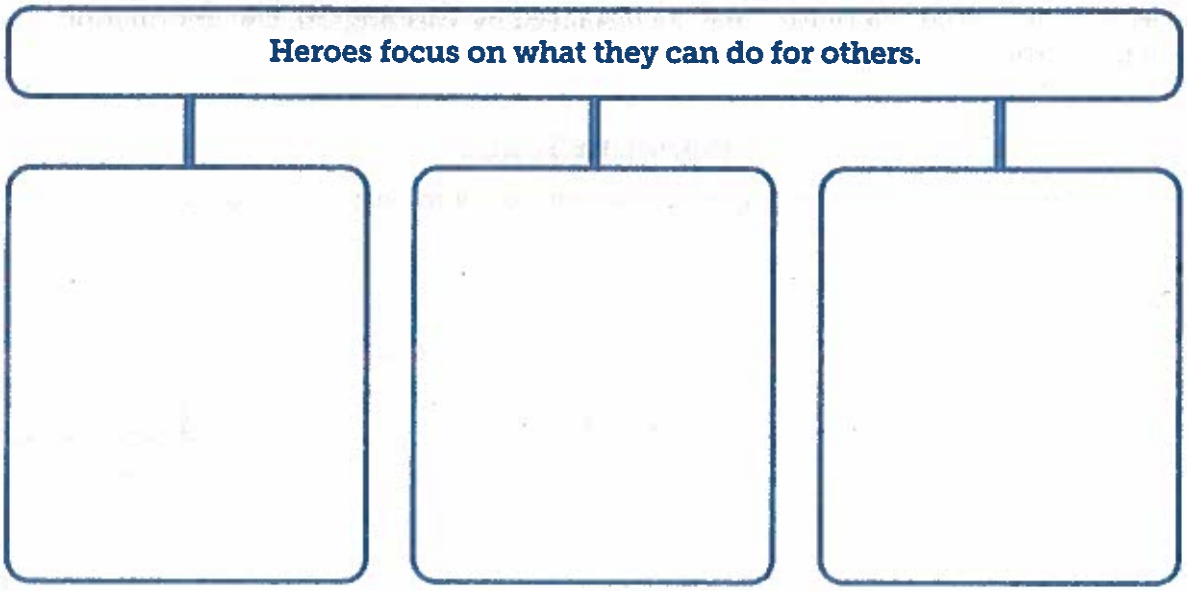
116 The title of the article is phrased as a question. Explain how this relates to the main purpose of the article. What does it indicate about how the author wants to affect readers? Use details from the article to support your answer.

117 Read this part of the quote from Dr. Mae Jemison.

> ***"By using the example of others you look up to, you can fan the flames of inspiration and find the hero in yourself."***

Explain what Jemison means by saying you can "fan the flames of inspiration." Use details from the quote to support your answer.

118 A common idea in the article is that heroes focus on what they can do for others. Complete the chart below by giving three examples of heroes described in the quotes that support this idea.



119 The last paragraph of the article describes Derek Jeter's role as founder and president of the Turn 2 Foundation. Explain why the author includes this information. Use details from the article to support your answer.

Science

Name :

Class :

Part I

1 Which sequence identifies the levels of organization of body structures in a human from simplest to most complex?

(1) cell → organ → tissue → organ system
(2) organ system → cell → tissue → organ
(3) tissue → organ → organ system → cell
(4) cell → tissue → organ → organ system

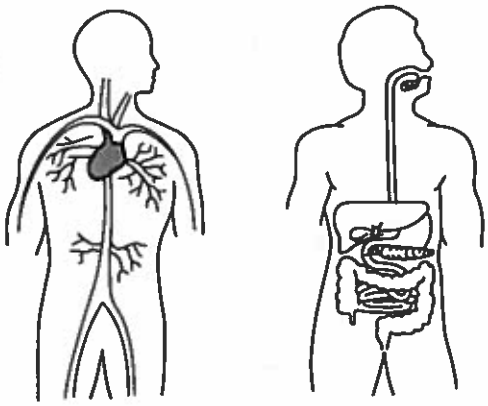
2 A student viewing a cell with a microscope observes a cell wall, a cell membrane, and a nucleus. The presence of these structures indicates that the student is looking at a cell from a

(1) rabbit
(2) carrot
(3) worm
(4) fly

3 Dogs and cats are animals that have many similar body structures but they do not mate with each other. These two animals are classified in

(1) the same kingdom and the same species
(2) the same kingdom, but different species
(3) different kingdoms, but the same species
(4) different kingdoms and different species

4 The diagrams below represent two systems of the human body.



(Not drawn to scale)

Which two systems are represented in the diagrams?

(1) endocrine and skeletal
(2) endocrine and respiratory
(3) circulatory and respiratory
(4) circulatory and digestive

5 Which process is responsible for the growth and repair of human tissue?

(1) evolution
(2) germination
(3) cell division
(4) natural selection

6 The primary role of the endocrine system is to

(1) produce hormones that regulate body functions
(2) form chemicals that destroy microbes
(3) break down food to release nutrients
(4) supply red blood cells to carry oxygen

7 The photograph below shows three cats with differences in their fur length and patterns.

These differences are most likely due to

(1) dietary habits
(2) sexual reproduction
(3) habitat destruction
(4) damage from disease

8 The hereditary material in corn plants can be altered by scientists so the plants produce more corn. Which term identifies this process?

(1) environmental degradation
(2) ecological succession
(3) natural selection
(4) genetic engineering

9 One function of a plant's seed is to

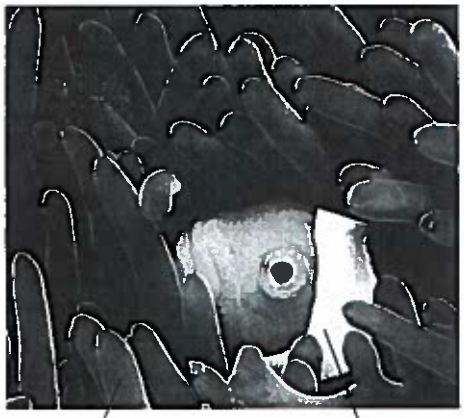
(1) perform photosynthesis
(2) provide food for early development
(3) decompose dead organisms
(4) reproduce sexually

16 Nutrients enter the bloodstream during the process of

(1) locomotion
(2) respiration
(3) elimination
(4) absorption

Base your answers to questions 17 and 18 on the information below about two animals, the sea anemone and the clownfish, and on your knowledge of science.

Clownfish are tiny, omnivorous fish that find shelter from predators in the poisonous tentacles of sea anemones. The sea anemones sting their prey to capture food, but the clownfish are not hurt by the stinging tentacles. The clownfish clean the tentacles of the sea anemone and scare off butterfly fish, which consume sea anemones.



17 The relationship between the sea anemone and clownfish is best described as

(1) competitive
(2) beneficial
(3) predatory
(4) harmful

18 The clownfish is classified as an omnivore because it eats

(1) both plants and animals
(2) neither plants nor animals
(3) only plants
(4) only animals

19 Which type of organism converts wastes and dead materials into nutrients that can be used by plants?

(1) carnivore
(2) herbivore
(3) decomposer
(4) producer

20 All of the different organisms interacting in a pond make up

(1) a community
(2) a population
(3) the water cycle
(4) the habitat

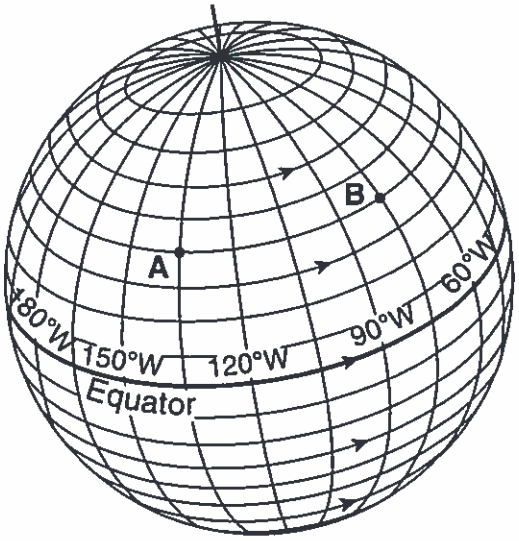
21 Which factor is most likely to cause the number of rabbits living in an area to increase?

(1) less water
(2) fewer predators
(3) lack of shelter
(4) limited food

22 One positive effect of recycling aluminum cans to manufacture new beverage containers is

(1) conserving Earth's resources
(2) creating acid rain
(3) warming Earth's atmosphere
(4) increasing the ozone layer

23 The diagram below represents a portion of Earth's latitude/longitude system. *A* and *B* are locations on Earth's surface. The arrows show the direction of Earth's rotation.



If it is noon at location *A*, then at location *B* it is

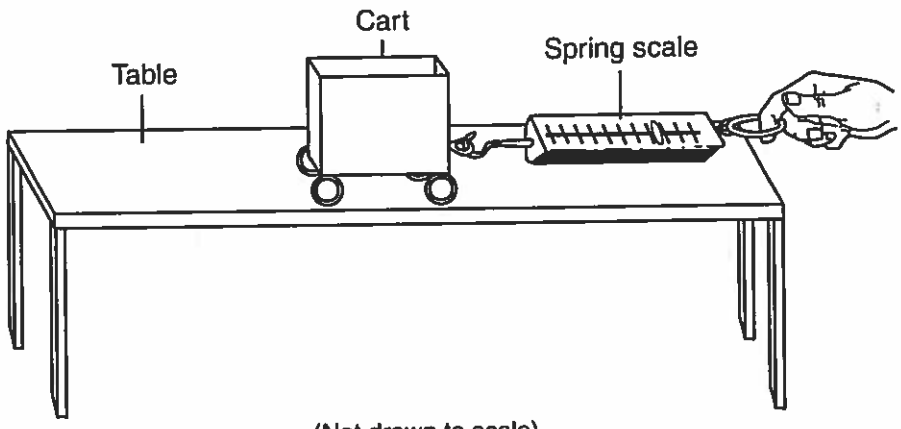
(1) morning
(2) noon
(3) afternoon
(4) midnight

Part II

Directions (46–84): Record your answers in the space provided below each question.

Base your answers to questions 46 through 48 on the information below and on your knowledge of science.

The diagram below represents a student using a spring scale to pull a toy cart across a level table.



(Not drawn to scale)

The student pulled the cart across the table five times. Each time, the student used more force. Force is measured in newtons (N) on the spring scale. The student then calculated the acceleration of the cart, measured in meters per second squared (m/s^2). The results are shown in the data table.

Data Table

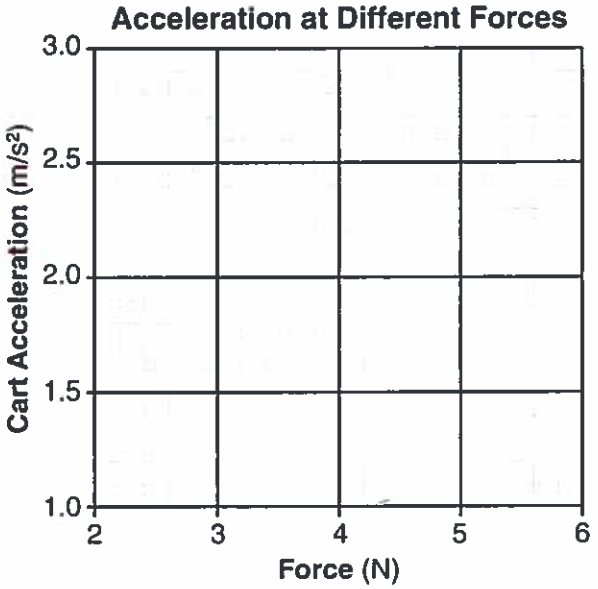
Force (N)	Cart Acceleration (m/s^2)
3.0	1.5
3.6	1.8
4.2	2.1
4.8	2.4
5.4	2.7

46 Determine the mass of the cart, using the equation below. [1]

$$\text{Force (newton)} = \text{mass (kg)} \times \text{acceleration } (m/s^2)$$

Mass of cart = _____ kg

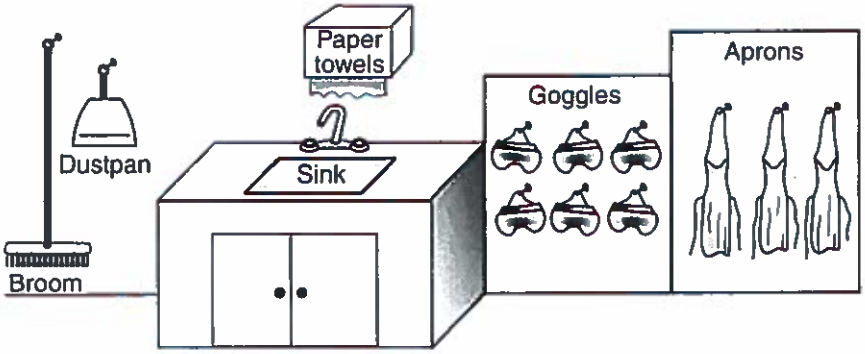
47 Based on the data in the table, construct a line graph on the grid below. Use an **X** to plot the acceleration of the cart for each force shown. Connect the **X**s with a solid line. [1]



48 Based on the graph, predict the acceleration of the cart if the student were to perform the same experiment again using 2 N of force. [1]

_____ m/s^2

49 The diagram below represents part of a science classroom. Several items are labeled.



(Not drawn to scale)

Choose *two* labeled items from the diagram and explain how each is used to keep students safe. [1]

Item 1: _____

Explanation: _____

Item 2: _____

Explanation: _____

Mid-Winter Math Packet
Grade 8

Instructions

Your Packet contains all multiple choice questions. Please do the following:

1. Attempt ALL Questions.
2. Use the mathematicians plan for ALL questions
3. Show your work OR give an explanation for ALL answers.
4. Use your notes, Pearson Realize Videos, Math packets from Class or the Internet to help you complete all questions.
5. STUDY! Do not just do the questions. Try to memorize the procedures, rules, and facts for each concept. Walk away with a deep understanding of each question.
6. ENJOY!

1 Mr. Thomsen is buying two types of gift cards to give as prizes to employees at a company meeting. He will buy restaurant gift cards that each cost $50. He will also buy movie theater gift cards that each cost $20. He has $450 to buy a total of 15 gift cards. How many of each type of gift card can Mr. Thomsen buy?

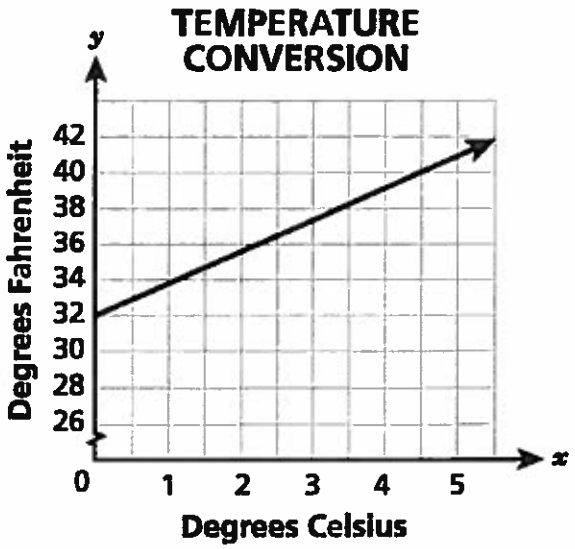
A He can buy 5 restaurant gift cards and 10 movie theater gift cards.

B He can buy 8 restaurant gift cards and 7 movie theater gift cards.

C He can buy 10 restaurant gift cards and 5 movie theater gift cards.

D He can buy 12 restaurant gift cards and 3 movie theater gift cards.

2 The relationship between temperature in degrees Fahrenheit and degrees Celsius is shown in the graph below.



What is the meaning of the *y*-intercept?

A the change in degrees Fahrenheit for every change of one degree Celsius

B the change in degrees Celsius for every change of one degree Fahrenheit

C the temperature in degrees Fahrenheit when the temperature is zero degrees Celsius

D the temperature in degrees Celsius when the temperature is zero degrees Fahrenheit

GO ON

3 Kevin moved from a city to a small town. The population of the city is 6×10^5, which is about 15 times as great as the small town. Which expression could represent the approximate population of the small town?

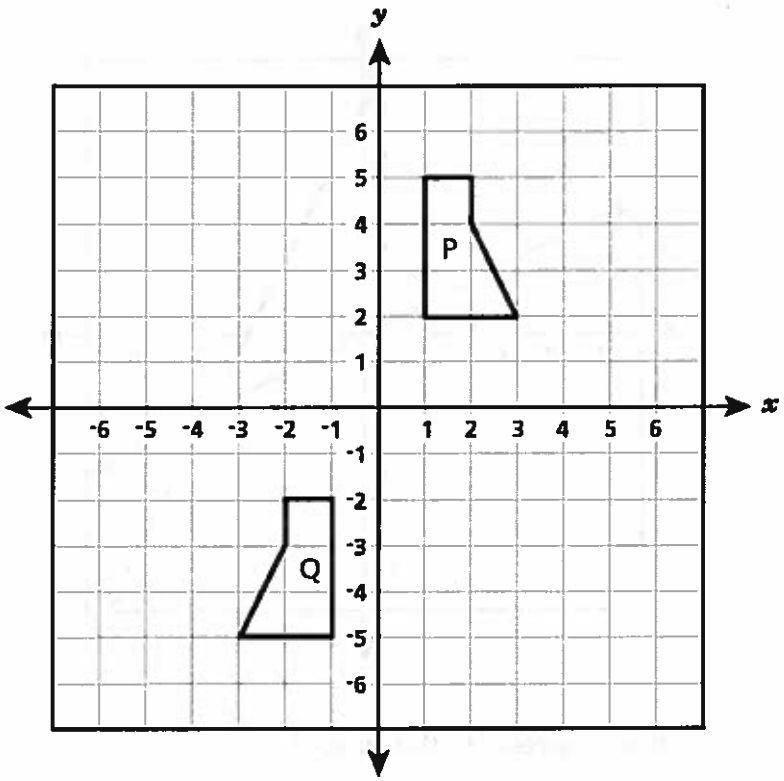
A 4×10^3

B 4×10^4

C 9×10^5

D 9×10^6

4 Pentagon P and pentagon Q, shown below, are congruent.



Which sequence could be used to transform pentagon P to pentagon Q?

A a 180° clockwise rotation about the origin

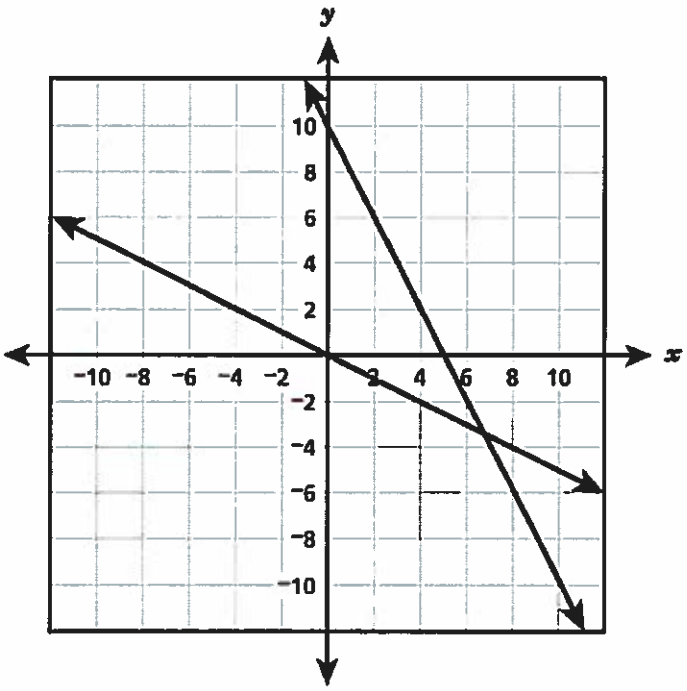
B a translation four units left and then a reflection over the *x*-axis

C a reflection over the *y*-axis and then a translation seven units down

D a translation seven units down and then a 90° clockwise rotation about the origin

GO ON

5 The graph of a system of equations is shown below.



What system of equations represents the graph?

A $y = -2x + 10$
$y = -\frac{1}{3}x$

B $y = -2x + 10$
$y = -\frac{1}{2}x$

C $y = -\frac{1}{2}x + 10$
$y = -2x$

D $y = -\frac{1}{3}x + 10$
$y = -2x$

6 A cylinder and a cone have congruent heights and radii. What is the ratio of the volume of the cone to the volume of the cylinder?

A 1 : 1

B 1 : 3

C 1 : 6

D 1 : 9

7 Which of the equations listed below are linear equations?

Equation I: $C = 2\pi r$

Equation II: $A = \pi r^2$

Equation III: $V = \frac{4}{3}\pi r^3$

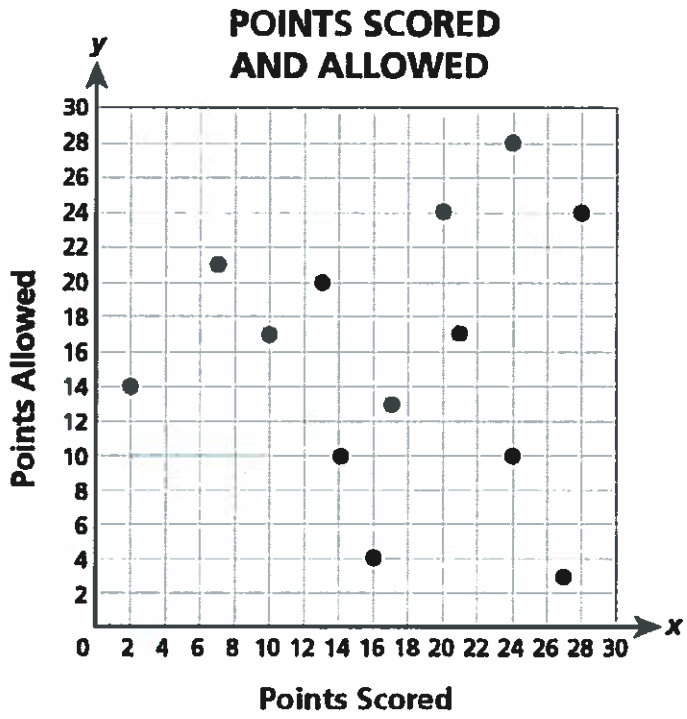
A equation I only

B equation II only

C equations I and III

D equations II and III

8 The scatter plot below shows the points scored and the points allowed by the Bulldogs football team for several games.



Which association (correlation) best describes the data?

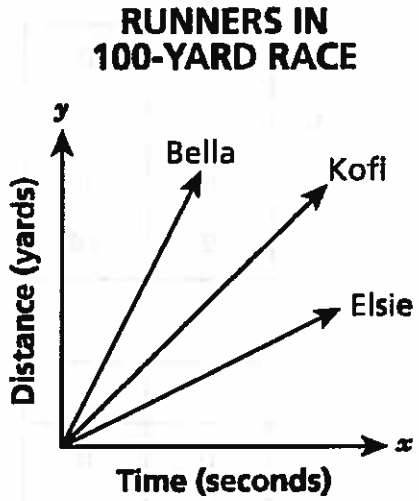
A no association (correlation)

B positive association (correlation)

C negative association (correlation)

D nonlinear association (correlation)

9 The graph below shows the relationship between the distances run and the time for three people in a 100-yard race.



The relationship between the distance run and the time for Kofi can be represented by the equation $y = 15.55x$, where he ran y yards in x seconds. Which two equations could be used to represent this relationship for Bella and Elsie?

A Bella: $y = 15.15x$; Elsie: $y = 15.85x$

B Bella: $y = 15.85x$; Elsie: $y = 15.65x$

C Bella: $y = 15.45x$; Elsie: $y = 15.15x$

D Bella: $y = 15.85x$; Elsie: $y = 15.15x$

GO ON

10 Which table of values represents a linear function?

A

x	y
0	0
1	1
4	16
9	81

C

x	y
0	0
1	2
4	8
9	18

B

x	y
0	1
1	3
4	9
9	20

D

x	y
0	0
1	2
4	4
9	6

37 Which equation represents a nonlinear function?

A $y = -3x + 1$

B $y = x^2 + 1$

C $y = \frac{x}{2} + 1$

D $y = 2x + \frac{1}{2}$

38 What is the value of the expression below?

$$\frac{(4.8 \times 10^8)}{(1.2 \times 10^4)} \times (2.2 \times 10^{-6})$$

A 0.88

B 0.088

C 0.0088

D 0.00088

39 A crane is lowering a concrete block from a height of 270 feet above the ground at a constant rate of 2.5 feet per second. Which function can be used to determine h, the height, in feet, above the ground of the concrete block after s seconds?

A $h = 270s + 2.5$

B $h = 2.5s + 270$

C $h = 270 - 2.5s$

D $h = 2.5s - 270$

40 Function P is a linear function with a y-intercept of 5. Function Q is defined by the equation $y = -\frac{1}{3}x + 4$. Which statement must be true about functions P and Q?

A Both functions have the same slope.

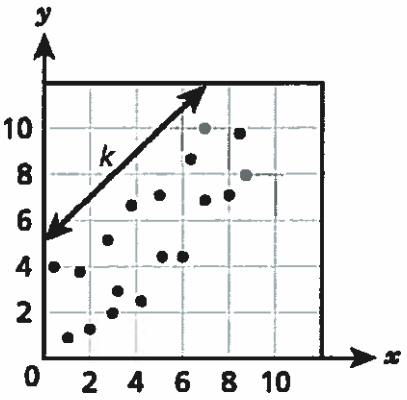
B Both functions have a negative slope.

C The functions will have the same input when $y = 0$.

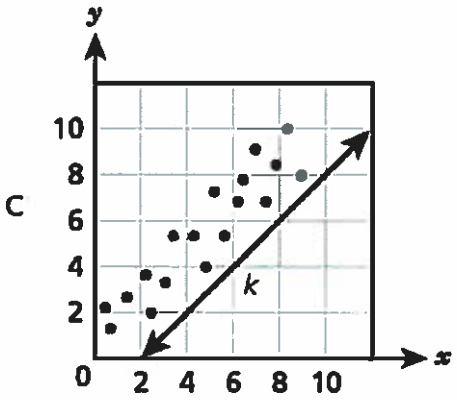
D The functions will have different outputs when $x = 0$.

41 Line k is the line of best fit for a set of data on a scatter plot. The data show a strong linear association. Which scatter plot best represents these data and line k?

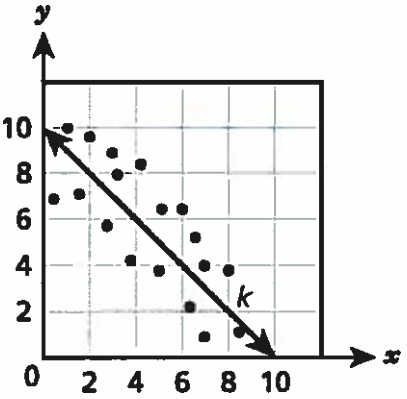
A



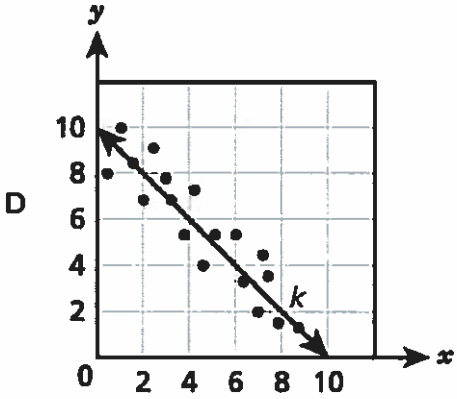
C



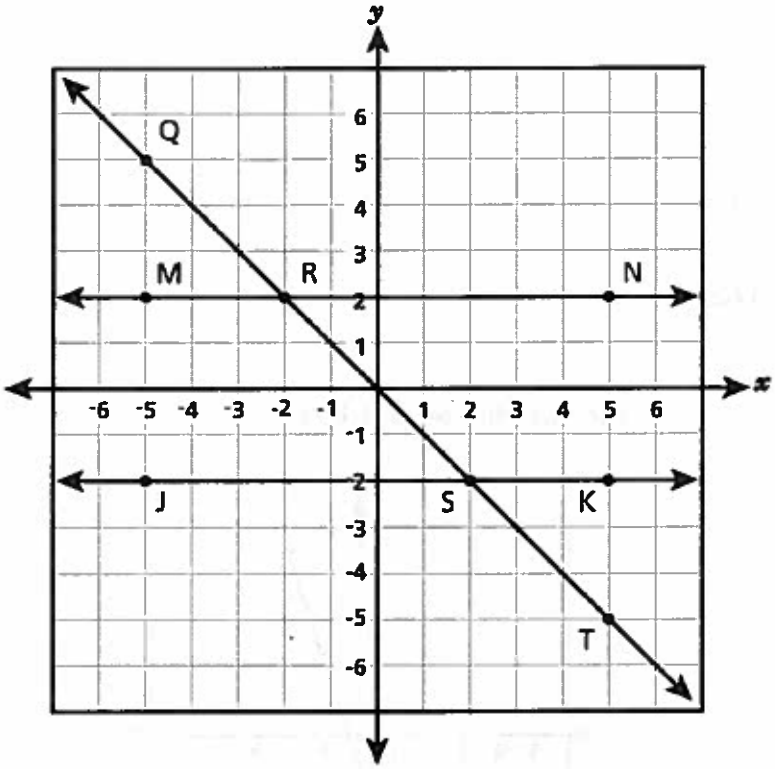
B



D



47 In the diagram below, lines MN and JK are parallel and are intersected by line QT.



Which transformation could be used to show that ∠MRS is congruent to ∠JST?

A reflect ∠MRS over the *x*-axis

B rotate ∠MRS about the origin

C translate ∠MRS down and to the right

D dilate ∠MRS by a scale factor of two with the center at point R

GO ON

48 What is the equation of the line that passes through points $(-3, 0.5)$ and $(3, -0.5)$?

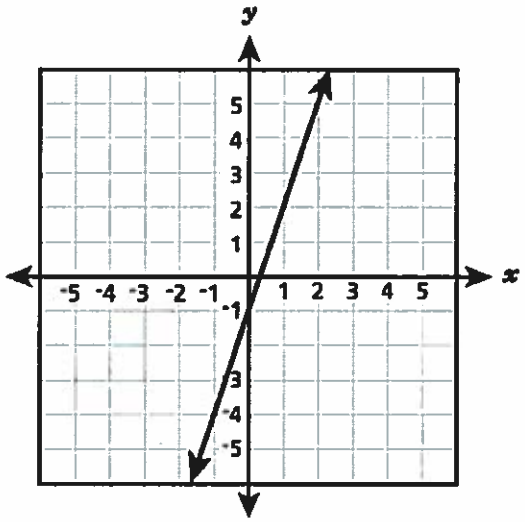
A $y = -\frac{1}{6}x$

B $y = -6x$

C $y = -\frac{1}{6}x + 1$

D $y = -6x - 17.5$

49 Function J is shown on the coordinate grid below.



If the y-intercept of Function R is $\frac{3}{2}$ greater than the y-intercept of Function J, which equation could represent Function R?

A $y = -x + 4.5$

B $y = 0.5x + 3$

C $y = 3x + 0.5$

D $y = 4.5x - 1$