TNReady EOC Practice Test Questions SET #2

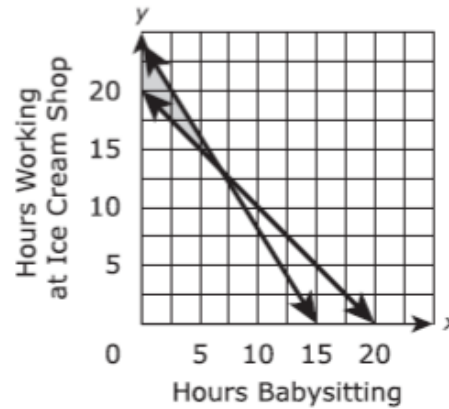| #	Question	
1 **N O** **C A L C**	Which graph **best** represents the solution to this system of inequalities? $$x + y \le 6$$ $$x + 2y \le 8$$ **A.** **B.** **C.** **D.** 	
2 **I N F O**	Use the following information to answer parts A through D of Problem #2. Leah would like to earn at least $120 per month. She babysits for $5 per hour and works at an ice cream shop for $8 per hour. Leah cannot work more than a total of 20 hours per month. Let x represent the number of hours Leah babysits and let y represent the number of hours Leah works at the ice cream shop.	

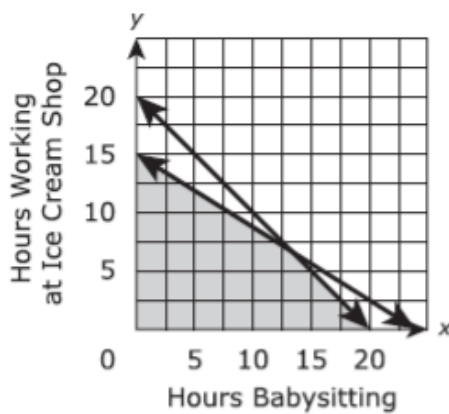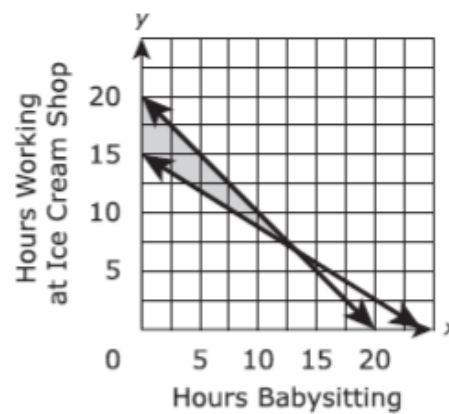| 2A	Which graph shows the set of points that represents the number of hours that Leah can work in order to earn at least $120 and not work more than 20 hours per month?	
	A. **B.** **C.** **D.**	
2B	Which pairs (x, y) represent hours that Leah could work to meet the given conditions? Select **all** that apply. A. $(4, 15)$ B. $(5, 12)$ C. $(10, 9)$ D. $(15, 5)$ E. $(19, 1)$	
2C	If Leah babysits for 7 hours this month, what is the minimum number of hours she would have to work at the ice cream shop to earn at least $120? Give your answer to the nearest whole hour. Enter your answer in the box.	
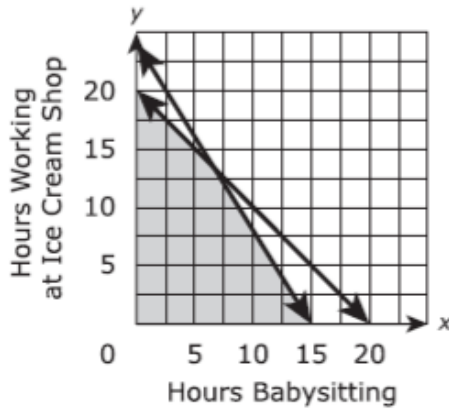
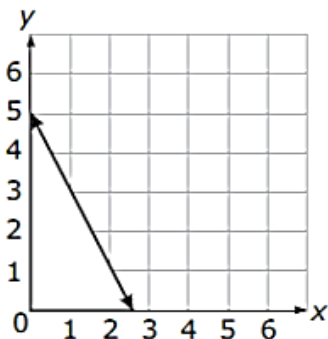| 2D	Leah prefers babysitting over working at the ice cream shop. Out of 20 total hours, what is the maximum number of hours she can babysit to be able to earn at least $120 per month? Give your answer to the nearest whole hour. Enter your answer in the box.	

3

N O

C A L C

What scenario could be modeled by the graph below?

A   The number of pounds of apples, y, minus two times the number of pounds of oranges, x, is at most 5.

B   The number of pounds of apples, y, minus half the number of pounds of oranges, x, is at most 5.

C   The number of pounds of apples, y, plus two times the number of pounds of oranges, x, is at most 5.

D   The number of pounds of apples, y, plus half the number of pounds of oranges, x, is at most 5.

4
NO CALC

Suppose that the function $f(x) = 2x + 12$ represents the cost to rent x movies a month from an internet movie club. Makayla now has $10. How many more dollars does Makayla need to rent 7 movies next month?

5

Dennis compared the y-intercept of the graph of the function $f(x) = 3x + 5$ to the y-intercept of the graph of the linear function that includes the points in the table below.

x	$g(x)$
⁻7	2
⁻5	3
⁻3	4
⁻1	5

What is the difference when the y-intercept of $f(x)$ is subtracted from the y-intercept of $g(x)$?

A   ⁻11.0

B   ⁻9.3

C   0.5

D   5.5

6

Monica did an experiment to compare two methods of warming an object. The results are shown in the table below.

Time (Hours)	Method 1 Temperature (°F)	Method 2 Temperature (°F)
0	0	1.5
1	5	3
2	11	6
3	15	12
4	19	24
5	25	48

Which statement *best* describes her results?

A   The temperature using both methods changed at a constant rate.

B   The temperature using both methods changed exponentially.

C   The temperature using Method 2 changed at a constant rate.

D   The temperature using Method 2 changed exponentially.

7

Mario compared the slope of the function graphed below to the slope of the linear function that has an x-intercept of $\frac{4}{3}$ and a y-intercept of ⁻2.
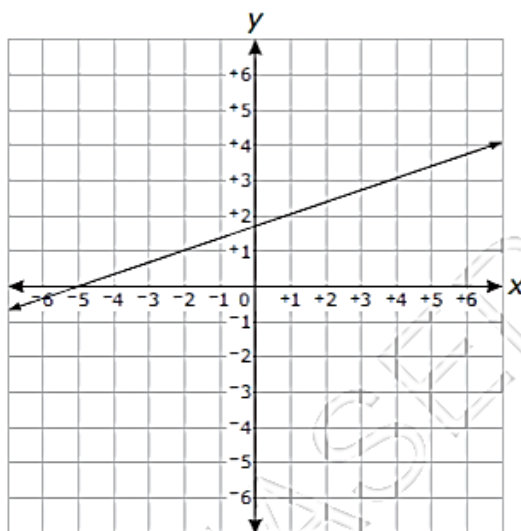
What is the slope of the function with the smaller slope?

A $\frac{1}{5}$

B $\frac{1}{3}$

C   3

D   5

8 The boiling point of water, T (measured in degrees), at altitude a (measured in feet) is modeled by the function $T(a) = {}^-0.0018a + 212$. In terms of altitude and temperature, which statement describes the meaning of the slope?

A   The boiling point increases by 18 degrees as the altitude increases by 1,000 feet.

B   The boiling point increases by 1.8 degrees as the altitude increases by 1,000 feet.

C   The boiling point decreases by 18 degrees as the altitude increases by 1,000 feet.

D   The boiling point decreases by 1.8 degrees as the altitude increases by 1,000 feet.

9 The table below shows the distance a car has traveled.

Minutes	25	50	75	100	125
Distance Traveled (in miles)	20	40	60	80	100

What is the meaning of the slope of the linear model for the data?

A   The car travels 5 miles every minute.

B   The car travels 4 miles every minute.

C   The car travels 4 miles every 5 minutes.

D   The car travels 5 miles every 4 minutes.

10 A line segment has endpoints $J(2, 4)$ and $L(6, 8)$. The point K is the midpoint of $\overline{JL}$. What is an equation of a line perpendicular to $\overline{JL}$ and passing through K?

A $y = {}^-x + 10$

B $y = {}^-x - 10$

C $y = x + 2$

D $y = x - 2$

11 A triangle has vertices at $(1, 3)$, $(2, {}^-3)$, and $({}^-1, {}^-1)$. What is the *approximate* perimeter of the triangle?

A   10

B   14

C   15

D   16

12

Cell phone Company Y charges a $10 start-up fee plus $0.10 per minute, x.
Cell phone Company Z charges $0.20 per minute, x, with no start-up fee. Which
function represents the difference in cost between Company Y and Company Z?

A $f(x) = {}^-0.10x - 10$

B $f(x) = {}^-0.10x + 10$

C $f(x) = 10x - 0.10$

D $f(x) = 10x + 0.10$

13

The sequence below shows the number of trees a nursery plants each year.

2, 8, 32, 128, ...

Which formula could be used to determine the number of trees the nursery will
plant next year, NEXT, if the number of trees planted this year, NOW, is known?

A   NEXT = 4 • NOW

B   NEXT = $\frac{1}{4}$NOW

C   NEXT = 2 • NOW + 4

D   NEXT = NOW + 6

14

The sequence below shows the total number of days Francisco had used his gym
membership at the end of weeks 1, 2, 3, and 4.

4, 9, 14, 19, ...

Assuming the pattern continued, which function could be used to find the total
number of days Francisco had used his gym membership at the end of week n?

A $f(n) = n + 5$

B $f(n) = 5n - 1$

C $f(n) = 5n + 4$

D $f(n) = n^2$

15

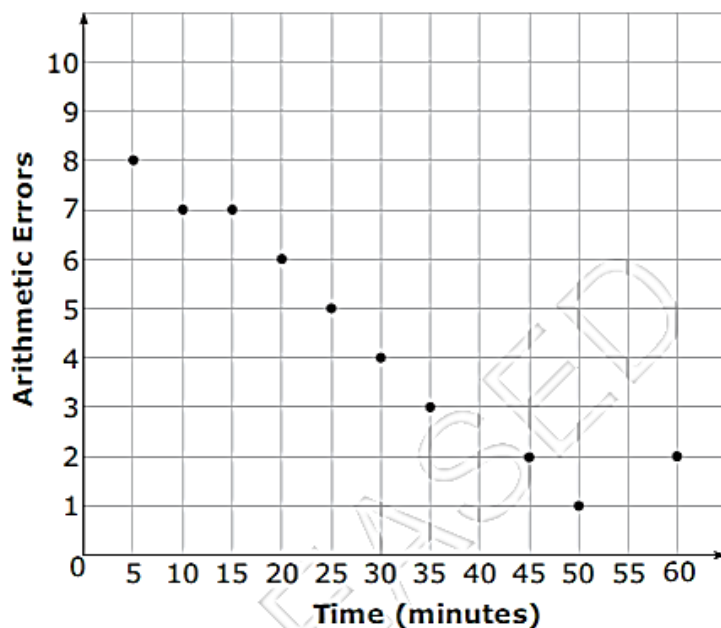*R* is the midpoint of segment *PS*. *Q* is the midpoint of segment *RS*.
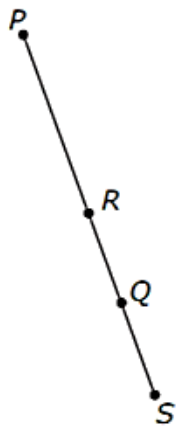
P is located at (8, 10), and *S* is located at (12, ⁻6). What are the coordinates of *Q*?

A   (4, 2)

B   (2, ⁻8)

C   (11, ⁻2)

D   (10, 2)

16

The scatterplot below shows the number of arithmetic errors 10 students made on a quiz and the amount of time the students took to complete the quiz.

Which describes the relationship between the number of arithmetic errors the students made and the amount of time the students took to complete the quiz?

A   There is a strong positive relationship between the variables.

B   There is a strong negative relationship between the variables.

C   There is a weak positive relationship between the variables.

D   There is a weak negative relationship between the variables.