

Question ID de6fe450

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Algebra	Linear functions	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

ID: de6fe450

On January 1, 2015, a city's minimum hourly wage was \$9.25. It will increase by \$0.50 on the first day of the year for the next 5 years. Which of the following functions best models the minimum hourly wage, in dollars, x years after January 1, 2015, where $x = 1, 2, 3, 4, 5$?

- A. $f(x) = 9.25 - 0.50x$
- B. $f(x) = 9.25x - 0.50$
- C. $f(x) = 9.25 + 0.50x$
- D. $f(x) = 9.25x + 0.50$

Question ID Ie11190a


Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Algebra	Systems of two linear equations in two variables	■ ■ ■

ID: Ie11190a

Store A sells raspberries for **\$5.50** per pint and blackberries for **\$3.00** per pint. Store B sells raspberries for **\$6.50** per pint and blackberries for **\$8.00** per pint. A certain purchase of raspberries and blackberries would cost **\$37.00** at Store A or **\$66.00** at Store B. How many pints of blackberries are in this purchase?

- A. 4
- B. 5
- C. 8
- D. 12

Question ID 7839lfcc

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Algebra	Linear functions	

ID: 7839lfcc

x	-11	-10	-9	-8
$f(x)$	21	18	15	12

The table above shows some values of x and their corresponding values $f(x)$ for the linear function f . What is the x -intercept of the graph of $y = f(x)$ in the xy -plane?

- A. $(-3,0)$
- B. $(-4,0)$
- C. $(-9,0)$
- D. $(-12,0)$

Question ID 9ff10b3b

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Algebra	Linear equations in one variable	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

ID: 9ff10b3b

If $\frac{1}{2}x - \frac{1}{6}x = 1$, what is

the value of x ?

A. -4

B. $\frac{1}{3}$

C. 3

D. 6

Question ID e77a76ce

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Algebra	Systems of two linear equations in two variables	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>

ID: e77a76ce

Which of the following systems of linear equations has no solution?


A. $y = 6x + 3$ $y = 6x + 9$

B. $y = 10$ $y = 10x + 10$

C. $y = 14x + 14$ $y = 10x + 14$

D. $x = 3$ $y = 10$

Question ID b8e73b5b

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Algebra	Linear inequalities in one or two variables	

ID: b8e73b5b

Ken is working this summer as part of a crew on a farm. He earned \$8 per hour for the first 10 hours he worked this week. Because of his performance, his crew leader raised his salary to \$10 per hour for the rest of the week. Ken saves 90% of his earnings from each week. What is the least number of hours he must work the rest of the week to save at least \$270 for the week?

- A. 38
- B. 33
- C. 22
- D. 16

Question ID 830120b0

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Algebra	Linear inequalities in one or two variables	■ ■ ■

ID: 830120b0

$$y > 2x - 1$$
$$2x > 5$$

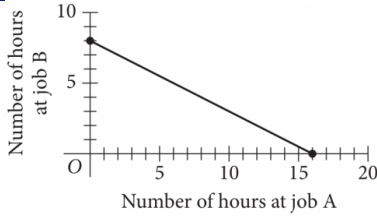
Which of the following consists of the y -coordinates of all the points that satisfy the system of inequalities above?

- A. $y > 6$
- B. $y > 4$
- C. $y > \frac{5}{2}$
- D. $y > \frac{3}{2}$

Question ID c4ea43ef

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Algebra	Linear equations in two variables	■ ■ ■

ID: c4ea43ef



To earn money for college, Avery works two part-time jobs: A and B. She earns \$10 per hour working at job A and \$20 per hour working at job B. In one week, Avery earned a total of s dollars for working at the two part-time jobs. The graph above represents all possible combinations of numbers of hours Avery could have worked at the two jobs to earn s dollars. What is the value of s ?

- A. 128
- B. 160
- C. 200
- D. 320

Question ID I13b938e

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Algebra	Linear functions	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>

ID: I13b938e

$$y = 18 - 5x$$

The equation above represents the speed y , in feet per second, of Sheila's bicycle x seconds after she applied the brakes at the end of a ride. If the equation is graphed in the xy -plane, which of the following is the best interpretation of the x -coordinate of the line's x -intercept in the context of the problem?

- A. The speed of Sheila's bicycle, in feet per second, before Sheila applied the brakes
- B. The number of feet per second the speed of Sheila's bicycle decreased each second after Sheila applied the brakes
- C. The number of seconds it took from the time Sheila began applying the brakes until the bicycle came to a complete stop
- D. The number of feet Sheila's bicycle traveled from the time she began applying the brakes until the bicycle came to a complete stop

Question ID 2ela7f66

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Algebra	Linear equations in two variables	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>

ID: 2ela7f66

Figure A and figure B are both regular polygons. The sum of the perimeter of figure A and the perimeter of figure B is **63** inches. The equation $3x + 6y = 63$ represents this situation, where x is the number of sides of figure A and y is the number of sides of figure B. Which statement is the best interpretation of **6** in this context?

- A. Each side of figure B has a length of **6** inches.
- B. The number of sides of figure B is **6**.
- C. Each side of figure A has a length of **6** inches.
- D. The number of sides of figure A is **6**.

Question ID 5e422ff9

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Algebra	Systems of two linear equations in two variables	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>

ID: 5e422ff9

$$y = 2x - 3$$
$$3y = 5x$$

In the solution to the system of equations above, what is the value of y ?

- A. -15
- B. -9
- C. 9
- D. 15

Question ID e744499e

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Algebra	Linear inequalities in one or two variables	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

ID: e744499e

An elementary school teacher is ordering x workbooks and y sets of flash cards for a math class. The teacher must order at least 20 items, but the total cost of the order must not be over \$80. If the workbooks cost \$3 each and the flash cards cost \$4 per set, which of the following systems of inequalities models this situation?

- A. $x + y \geq 20$
 $3x + 4y \leq 80$
- B. $x + y \geq 20$
 $3x + 4y \geq 80$
- C. $3x + 4y \leq 20$
 $x + y \geq 80$
- D. $x + y \leq 20$
 $3x + 4y \geq 80$

Question ID 36ab4122

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Algebra	Linear equations in one variable	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>

ID: 36ab4122

Megan's regular wage at her job is p dollars per hour for the first 8 hours of work in a day plus 1.5 times her regular hourly wage for work in excess of 8 hours that day. On a given day, Megan worked for 10 hours, and her total earnings for that day were \$137.50. What is Megan's regular hourly wage?

- A. \$11.75
- B. \$12.50
- C. \$13.25
- D. \$13.75

Question ID lefd8202

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Algebra	Linear equations in two variables	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

ID: lefd8202

$y = 70x + 8$ Which table gives three values of x and their corresponding values of y for the given equation?

A.

x	y
0	8
2	148
4	288

B.

x	y
0	70
2	78
4	86

C.

x	y
0	70
2	140
4	280

D.

x	y
0	8
2	132
4	272

Question ID 4f7981a0

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Algebra	Linear equations in one variable	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

ID: 4f7981a0

If $3x + 2 = 8$, what is the value of $9x + 6$?

Question ID e9ef0e6b

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Algebra	Linear inequalities in one or two variables	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>

ID: e9ef0e6b

A model estimates that whales from the genus *Eschrichtius* travel **72** to **77** miles in the ocean each day during their migration. Based on this model, which inequality represents the estimated total number of miles, x , a whale from the genus *Eschrichtius* could travel in **16** days of its migration?

- A. $72 + 16 \leq x \leq 77 + 16$
- B. $(72)(16) \leq x \leq (77)(16)$
- C. $72 \leq 16 + x \leq 77$
- D. $72 \leq 16x \leq 77$

Question ID cb58833c

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Algebra	Linear equations in two variables	■ ■ ■

ID: cb58833c

The line with the equation $\frac{4}{5}x + \frac{1}{3}y = 1$ is graphed in the xy -plane. What is the x -coordinate of the x -intercept of the line?

Question ID 567ac7ab

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Algebra	Systems of two linear equations in two variables	■ ■ ■

ID: 567ac7ab

One of the two equations in a linear system is $2x + 6y = 10$. The system has no solution. Which of the following could be the other equation in the system?

- A. $x + 3y = 5$
- B. $x + 3y = -20$
- C. $6x - 2y = 0$
- D. $6x + 2y = 10$

Question ID a04050d8

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Algebra	Linear functions	■ ■ ■

ID: a04050d8

The table above gives the typical amounts of energy per gram, expressed in both food calories and kilojoules, of the three macronutrients in food. If the 180 food calories in a granola bar come entirely from p grams of protein, f grams of fat, and c grams of carbohydrate, which of the following expresses f in terms of p and c ?

Energy per Gram of Typical Macronutrients

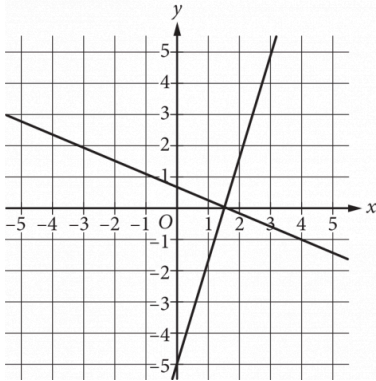
Macronutrient	Food calories	Kilojoules
Protein	4.0	16.7
Fat	9.0	37.7
Carbohydrate	4.0	16.7

- A. $f = 20 + \frac{4}{9}(p + c)$
- B. $f = 20 - \frac{4}{9}(p + c)$
- C. $f = 20 - \frac{4}{9}(p - c)$
- D. $f = 20 + \frac{9}{4}(p + c)$

Question ID 2704399f

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Algebra	Systems of two linear equations in two variables	■ ■ □

ID: 2704399f



Which of the following systems of equations has the same solution as the system of equations graphed above?

- A. $y = 0$
 $x = \frac{3}{2}$
- B. $y = \frac{3}{2}$
 $x = 0$
- C. $y = 0$
 $x = 1$
- D. $y = 1$
 $x = 0$