

Question ID 89dc2564

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

ID: 89dc2564

Line k is defined by $y = 3x + 15$. Line j is perpendicular to line k in the xy -plane. What is the slope of line j ?

- A. $-\frac{1}{3}$
- B. $-\frac{1}{12}$
- C. $-\frac{1}{18}$
- D. $-\frac{1}{45}$

Question ID 4abb3e2e

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

ID: 4abb3e2e

The equation $46 = 2x + 2y$ gives the perimeter of a rectangular rug that has length x , in feet, and width y , in feet. The width of the rug is 8 feet. What is the length, in feet, of the rug?

Question ID 950af39d

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

ID: 950af39d

A mixture consisting of only vitamin D and calcium has a total mass of **150** grams. The mass of vitamin D in the mixture is **50** grams. What is the mass, in grams, of calcium in the mixture?

- A. **200**
- B. **150**
- C. **100**
- D. **50**

Question ID db098e2

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

ID: db098e2

Jay walks at a speed of **3** miles per hour and runs at a speed of **5** miles per hour. He walks for *w* hours and runs for *r* hours for a combined total of **14** miles. Which equation represents this situation?

- A. $3w + 5r = 14$
- B. $\frac{1}{3}w + \frac{1}{5}r = 14$
- C. $\frac{1}{3}w + \frac{1}{5}r = 112$
- D. $3w + 5r = 112$

Question ID d5e9c402

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

ID: d5e9c402

A line in the xy -plane has a slope of $-\frac{1}{2}$ and passes through the point $(0, 3)$. Which equation represents this line?

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

Question ID ace7d6eb

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

ID: ace7d6eb

A food truck buys forks for **\$0.04** each and plates for **\$0.48** each. The total cost of ***x*** forks and ***y*** plates is **\$661.76**. Which equation represents this situation?

- A. **$0.48x - 0.04y = 661.76$**
- B. **$0.04x - 0.48y = 661.76$**
- C. **$0.48x + 0.04y = 661.76$**
- D. **$0.04x + 0.48y = 661.76$**

Question ID e914e737

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

ID: e914e737

$y = 70x + 8$

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

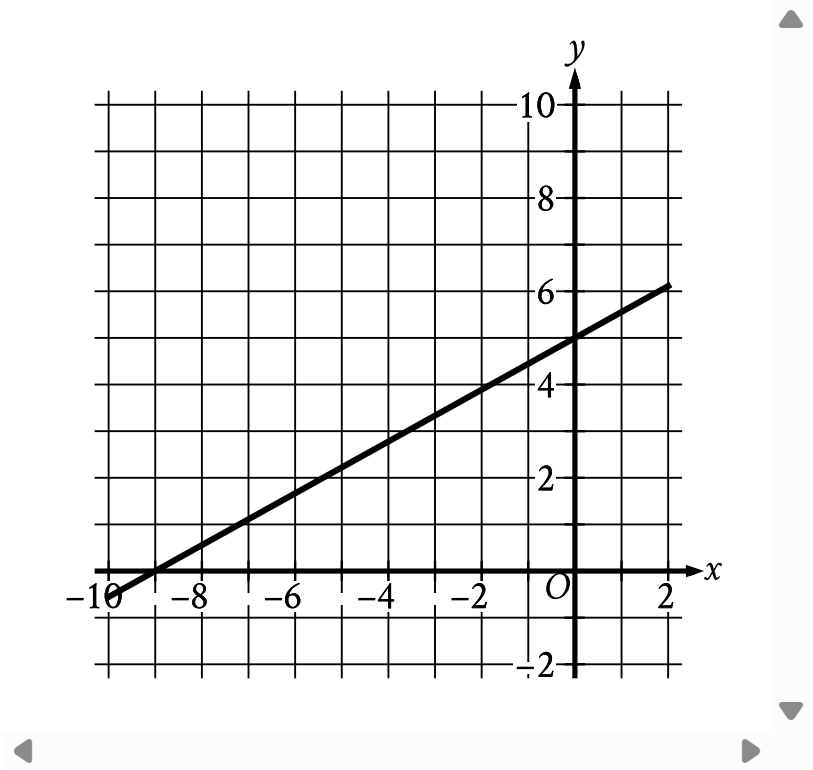
D.

x	y
0	8
2	132
4	272

Question ID 8b52b69a

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

ID: 8b52b69a



What is the y-intercept of the line graphed?

- A. $(-5, 0)$
- B. $(0, 0)$
- C. $(0, 5)$
- D. $(0, 9)$

Question ID 912eb2f0

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

ID: 912eb2f0

What is the y-intercept of the graph of $y = 34x + 81$ in the xy-plane?

- A. $(0, 81)$
- B. $(0, 34)$
- C. $(0, -34)$
- D. $(0, -81)$

Question ID e1dceebe

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

ID: e1dceebe

A teacher is creating an assignment worth **70** points. The assignment will consist of questions worth **1** point and questions worth **3** points. Which equation represents this situation, where *x* represents the number of **1**-point questions and *y* represents the number of **3**-point questions?

- A. $4xy = 70$
- B. $4(x + y) = 70$
- C. $3x + y = 70$
- D. $x + 3y = 70$

Question ID 95d2d776

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

ID: 95d2d776

A producer is creating a video with a length of **70** minutes. The video will consist of segments that are **1** minute long and segments that are **3** minutes long. Which equation represents this situation, where ***x*** represents the number of **1**-minute segments and ***y*** represents the number of **3**-minute segments?

- A. **$4xy = 70$**
- B. **$4(x + y) = 70$**
- C. **$3x + y = 70$**
- D. **$x + 3y = 70$**

Question ID 85ee1336

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

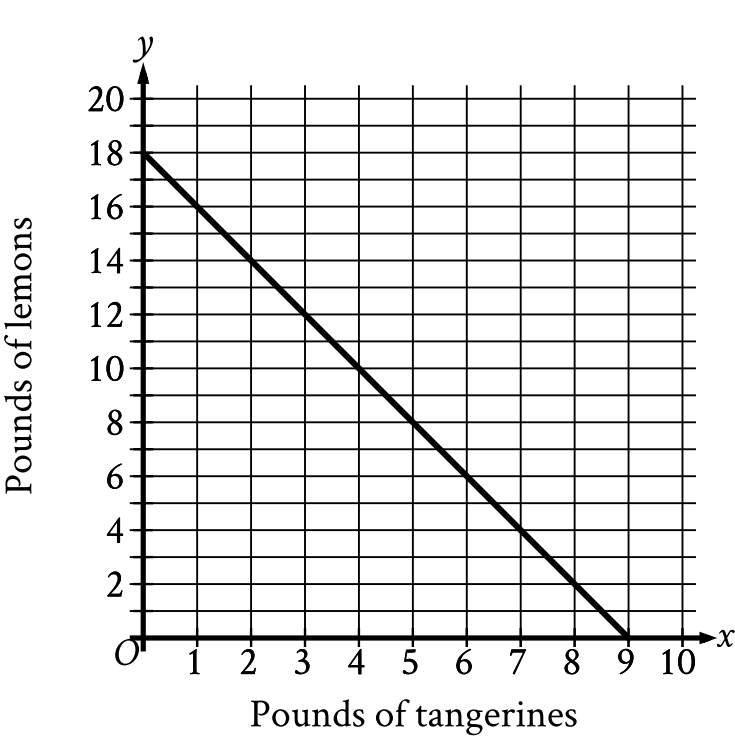
ID: 85ee1336

The equation $46 = 2a + 2b$ gives the relationship between the side lengths a and b of a certain parallelogram. If $a = 9$, what is the value of b ?

Question ID 60488560

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

ID: 60488560



The graph shows the possible combinations of the number of pounds of tangerines and lemons that could be purchased for \$18 at a certain store. If Melvin purchased lemons and 4 pounds of tangerines for a total of \$18, how many pounds of lemons did he purchase?

- A. 7
- B. 10
- C. 14
- D. 16

Question ID 26c19603

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

ID: 26c19603

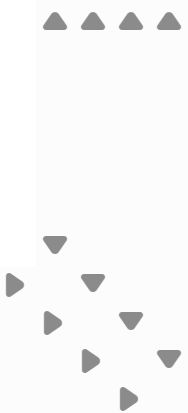
The y-intercept of the graph of $12x + 2y = 18$ in the xy-plane is $(0, y)$. What is the value of y ?

Question ID 7ae15e38

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

ID: 7ae15e38

x	y
0	18
1	13
2	8



The table shows three values of x and their corresponding values of y . There is a linear relationship between x and y . Which of the following equations represents this relationship?

- A. $y = 18x + 13$
- B. $y = 18x + 18$
- C. $y = -5x + 13$
- D. $y = -5x + 18$

Question ID b799405e

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

ID: b799405e

Vivian bought party hats and cupcakes for **\$71**. Each package of party hats cost **\$3**, and each cupcake cost **\$1**. If Vivian bought **10** packages of party hats, how many cupcakes did she buy?

Question ID 977935fa

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

ID: 977935fa

The y -intercept of the graph of $y = -6x - 32$ in the xy -plane is $(0, y)$. What is the value of y ?

Question ID e497b622

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

ID: e497b622

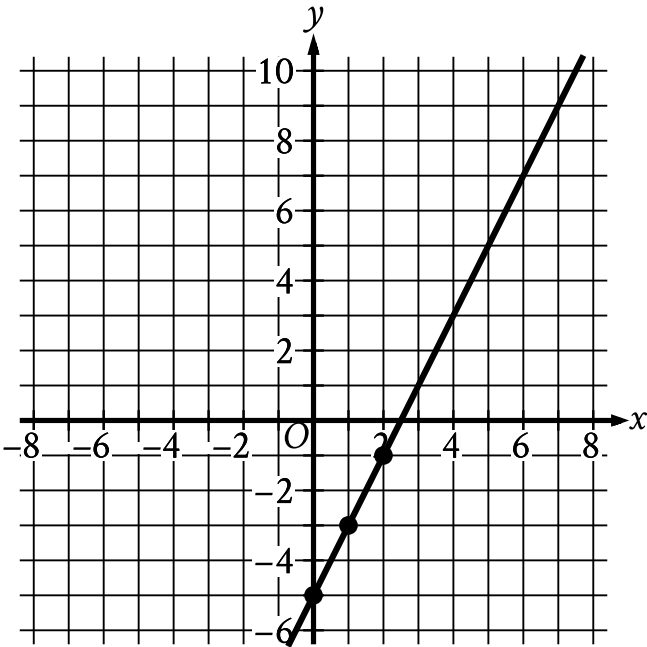
A shipment consists of **5**-pound boxes and **10**-pound boxes with a total weight of **220** pounds. There are **13** **10**-pound boxes in the shipment. How many **5**-pound boxes are in the shipment?

- A. **5**
- B. **10**
- C. **13**
- D. **18**

Question ID ccb84027

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

ID: ccb84027



The graph shows the linear relationship between x and y . Which table gives three values of x and their corresponding values of y for this relationship?

A.

x	y
0	0
1	-7
2	-9

B.

x	y
0	0
1	-3
2	-1

C.

x	y
-----	-----

0	−5
1	−7
2	−9

D.

x	y
0	−5
1	−3
2	−1

Question ID 77b21e2b

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

ID: 77b21e2b

Line r in the xy -plane has a slope of 4 and passes through the point $(0, 6)$. Which equation defines line r ?

- A. $y = -6x + 4$
- B. $y = 6x + 4$
- C. $y = 4x - 6$
- D. $y = 4x + 6$

Question ID a4a5e4ad

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

ID: a4a5e4ad

Last week, an interior designer earned a total of **\$1,258** from consulting for x hours and drawing up plans for y hours. The equation $68x + 85y = 1,258$ represents this situation. Which of the following is the best interpretation of **68** in this context?

- A. The interior designer earned **\$68** per hour consulting last week.
- B. The interior designer worked **68** hours drawing up plans last week.
- C. The interior designer earned **\$68** per hour drawing up plans last week.
- D. The interior designer worked **68** hours consulting last week.

Question ID 56b227af

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

ID: 56b227af

$y = x + 4$

Which table gives three values of x and their corresponding values of y for the given equation?

A.

x	y
0	4
1	5
2	6

B.

x	y
0	6
1	5
2	4

C.

x	y
0	2
1	1
2	0

D.

x	y
0	0
1	1
2	2

Question ID 74510a38

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

ID: 74510a38

A total of **364** paper straws of equal length were used to construct two types of polygons: triangles and rectangles. The triangles and rectangles were constructed so that no two polygons had a common side. The equation **$3x + 4y = 364$** represents this situation, where **x** is the number of triangles constructed and **y** is the number of rectangles constructed. What is the best interpretation of **$(x, y) = (24, 73)$** in this context?

- A. If **24** triangles were constructed, then **73** rectangles were constructed.
- B. If **24** triangles were constructed, then **73** paper straws were used.
- C. If **73** triangles were constructed, then **24** rectangles were constructed.
- D. If **73** triangles were constructed, then **24** paper straws were used.

Question ID 3236ca30

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

ID: 3236ca30

A line in the xy -plane has a slope of $\frac{1}{9}$ and passes through the point $(0, 14)$. Which equation represents this line?

- A. $y = -\frac{1}{9}x - 14$
- B. $y = -\frac{1}{9}x + 14$
- C. $y = \frac{1}{9}x - 14$
- D. $y = \frac{1}{9}x + 14$

Question ID 6deb3100

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

ID: 6deb3100

A chemist studying the impact of salt on a process mixes x kilograms of a low-salt mixture, which is **2%** salt by weight, with y kilograms of a high-salt mixture, which is **96%** salt by weight, to create **24** kilograms of a mixture that is **4%** salt by weight. Which equation represents this situation?

- A. $0.96x + 0.02y = (0.04)(24)$
- B. $0.02x + 0.96y = (0.04)(24)$
- C. $0.96x + 0.02y = 24$
- D. $0.02x + 0.96y = 24$

Question ID 52d63c4b

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

ID: 52d63c4b

Line k is defined by $y = \frac{1}{4}x + 1$. Line j is parallel to line k in the xy -plane. What is the slope of j ?

Question ID 9c899c55

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

ID: 9c899c55

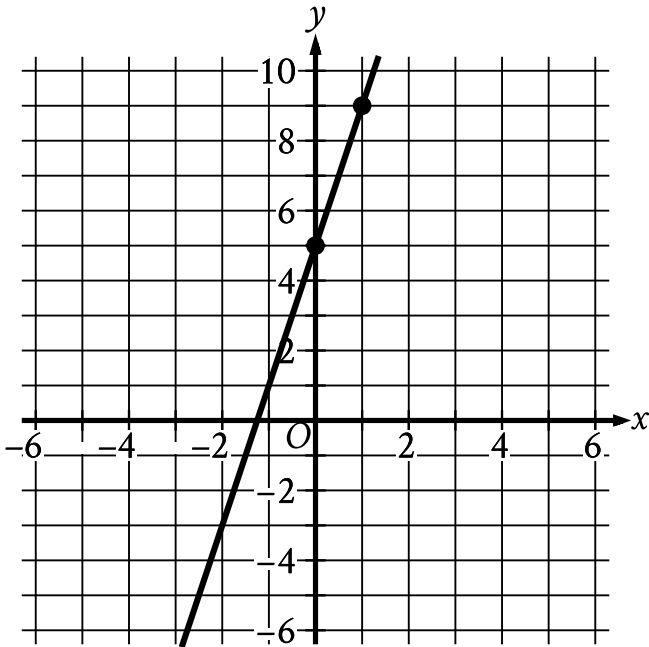
A machine makes large boxes or small boxes, one at a time, for a total of **700** minutes each day. It takes the machine **10** minutes to make a large box or **5** minutes to make a small box. Which equation represents the possible number of large boxes, x , and small boxes, y , the machine can make each day?

- A. $5x + 10y = 700$
- B. $10x + 5y = 700$
- C. $(x + y)(10 + 5) = 700$
- D. $(10 + x)(5 + y) = 700$

Question ID f2c128d8

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

ID: f2c128d8



Line j is shown in the xy -plane. Line k (not shown) is parallel to line j . What is the slope of line k ?

Question ID b3f00f4b

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

ID: b3f00f4b

Davio bought some potatoes and celery. The potatoes cost **\$0.69** per pound, and the celery cost **\$0.99** per pound. If Davio spent **\$5.34** in total and bought twice as many pounds of celery as pounds of potatoes, how many pounds of celery did Davio buy?

- A. **2**
- B. **2.5**
- C. **2.67**
- D. **4**

Question ID 7bb1beef

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

ID: 7bb1beef

The equation $40x + 20y = 160$ represents the number of sweaters, x , and number of shirts, y , that Yesenia purchased for \$160. If Yesenia purchased 2 sweaters, how many shirts did she purchase?

- A. 3
- B. 4
- C. 8
- D. 40

Question ID e7fef945

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

ID: e7fef945

What is the equation of the line that passes through the point $(0, 5)$ and is parallel to the graph of $y = 7x + 4$ in the xy -plane?

- A. $y = 5x$
- B. $y = 7x + 5$
- C. $y = 7x$
- D. $y = 5x + 7$

Question ID 7d371e27

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

ID: 7d371e27

In **2010**, a swim club had a total of **35** swimmers, each classified as either advanced or intermediate. From **2010** to **2020**, the number of advanced swimmers in the club increased by approximately **53%**, and the number of intermediate swimmers in the club increased by approximately **44%**. The total number of swimmers in the club increased by approximately **49%**. Which equation best represents this situation, where ***a*** represents the number of advanced swimmers in the club in **2010** and ***b*** represents the number of intermediate swimmers in the club in **2010**?

- A. $1.53a + 1.49b = 35(1.44)$
- B. $1.49a + 0.53b = 35(1.44)$
- C. $1.53a + 1.44b = 35(1.49)$
- D. $1.44a + 1.53b = 35(1.49)$

Question ID 241ef96a

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

ID: 241ef96a

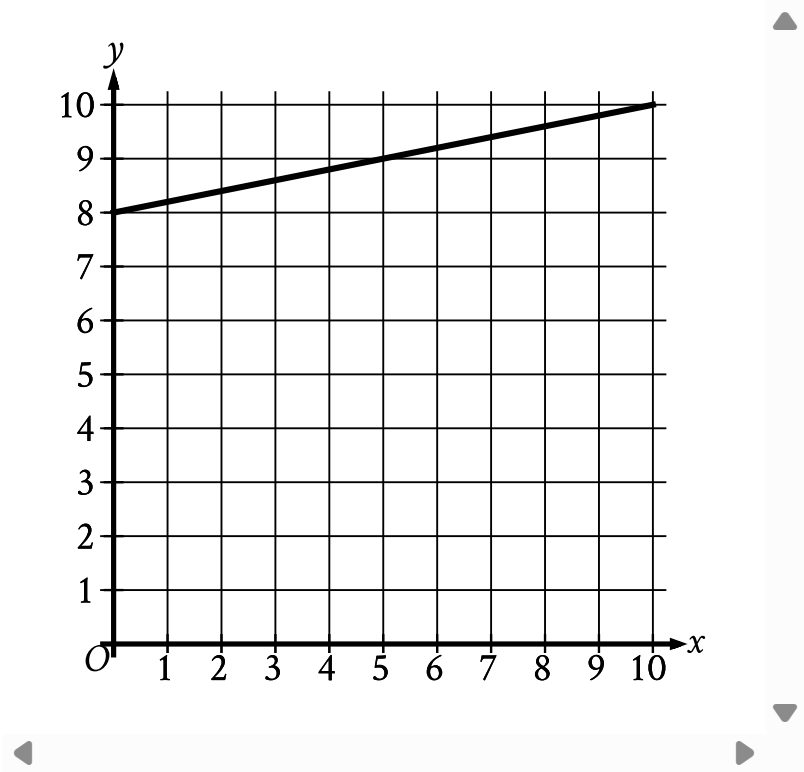
The equation $x + y = 1,440$ represents the number of minutes of daylight (between sunrise and sunset), x , and the number of minutes of non-daylight, y , on a particular day in Oak Park, Illinois. If this day has **670** minutes of daylight, how many minutes of non-daylight does it have?

- A. **670**
- B. **770**
- C. **1,373**
- D. **1,440**

Question ID a7db23d5

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

ID: a7db23d5



What is the y-intercept of the line graphed?

- A. $(0, -8)$
- B. $(0, -\frac{1}{8})$
- C. $(0, 0)$
- D. $(0, 8)$

Question ID 7999e5da

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

ID: 7999e5da

Naomi bought both rabbit snails and nerite snails for a total of **\$52**. Each rabbit snail costs **\$8** and each nerite snail costs **\$6**. If Naomi bought **2** nerite snails, how many rabbit snails did she buy?

- A. **5**
- B. **12**
- C. **14**
- D. **50**

Question ID 32b7c646

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

ID: 32b7c646

An employee at a restaurant prepares sandwiches and salads. It takes the employee **1.5** minutes to prepare a sandwich and **1.9** minutes to prepare a salad. The employee spends a total of **46.1** minutes preparing *x* sandwiches and *y* salads. Which equation represents this situation?

- A. $1.9x + 1.5y = 46.1$
- B. $1.5x + 1.9y = 46.1$
- C. $x + y = 46.1$
- D. $30.7x + 24.3y = 46.1$

Question ID 6492b769

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

ID: 6492b769

$y = -4x + 40$

Which table gives three values of x and their corresponding values of y for the given equation?

A.

x	y
0	0
1	-4
2	-8

B.

x	y
0	40
1	44
2	48

C.

x	y
0	40
1	36
2	32

D.

x	y
0	0
1	4
2	8

Question ID 80243fdf

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

ID: 80243fdf

$7x - 4y = -84$

For the given equation, which table gives three values of x and their corresponding values of y ?

- A.

x	0	4	8
y	21	28	35
- B.

x	0	4	8
y	35	28	21
- C.

x	21	28	35
y	0	4	8
- D.

x	21	28	35
y	8	4	0

Question ID 3526a6a1

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

ID: 3526a6a1

$$x + y = 350$$

The given equation relates the total number of maple trees, x , and the total number of birch trees, y , planted in a 14-acre forest preserve. If 245 maple trees were planted in the forest preserve, how many birch trees were planted in the forest preserve?

- A. 14
- B. 25
- C. 105
- D. 245

Question ID ba2f524f

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

ID: ba2f524f

For a camping trip a group bought x one-liter bottles of water and y three-liter bottles of water, for a total of **240** liters of water. Which equation represents this situation?

- A. $x + 3y = 240$
- B. $x + y = 240$
- C. $3x + 3y = 240$
- D. $3x + y = 240$

Question ID 3218eacf

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

ID: 3218eacf

A store sells two different-sized containers of a certain Greek yogurt. The store’s sales of this Greek yogurt totaled **1,277.94** dollars last month. The equation **$5.48x + 7.30y = 1,277.94$** represents this situation, where **x** is the number of smaller containers sold and **y** is the number of larger containers sold. According to the equation, which of the following represents the price, in dollars, of each smaller container?

- A. **5.48**
- B. **$7.30y$**
- C. **7.30**
- D. **$5.48x$**