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 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 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 dbe098e2

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

ID: dbe098e2

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

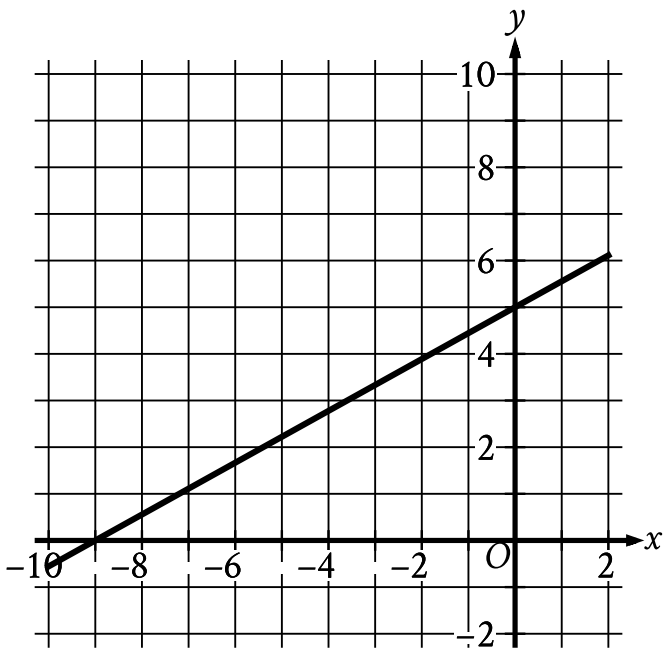
D.

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

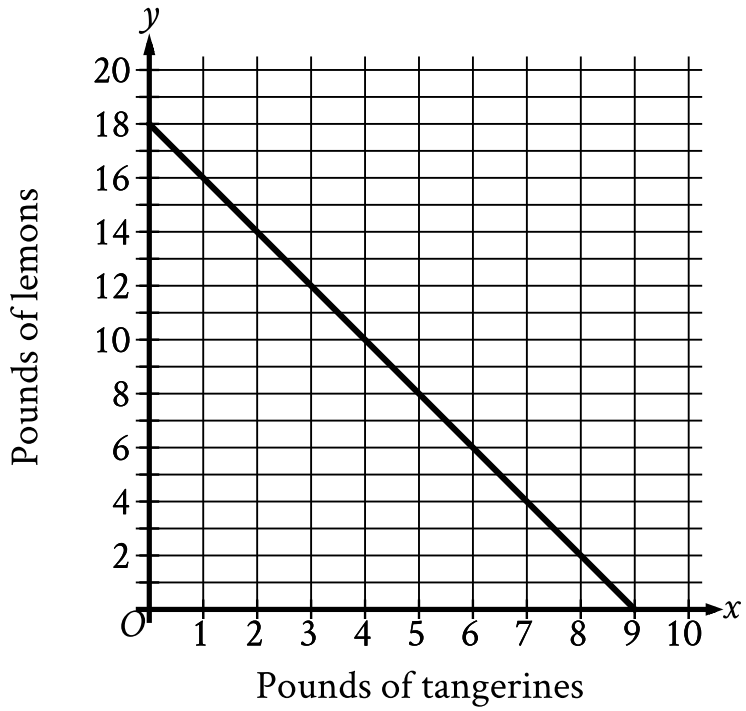
ID: 85ee1336

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

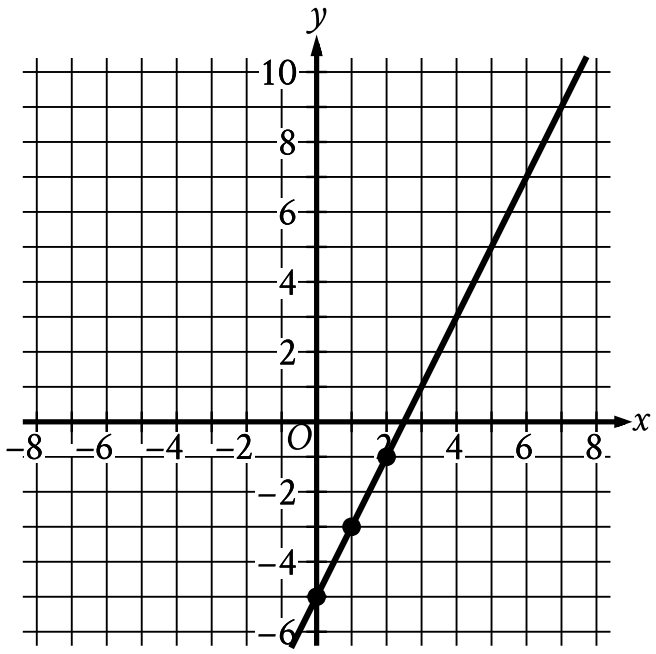
C. 13

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. $10x + 5y = 700$

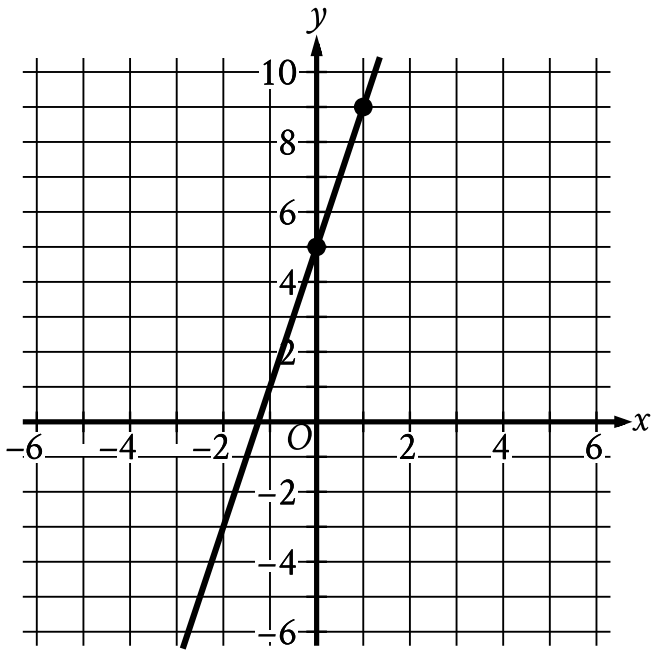
C. $(x + y)(10 + 5) = 700$

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

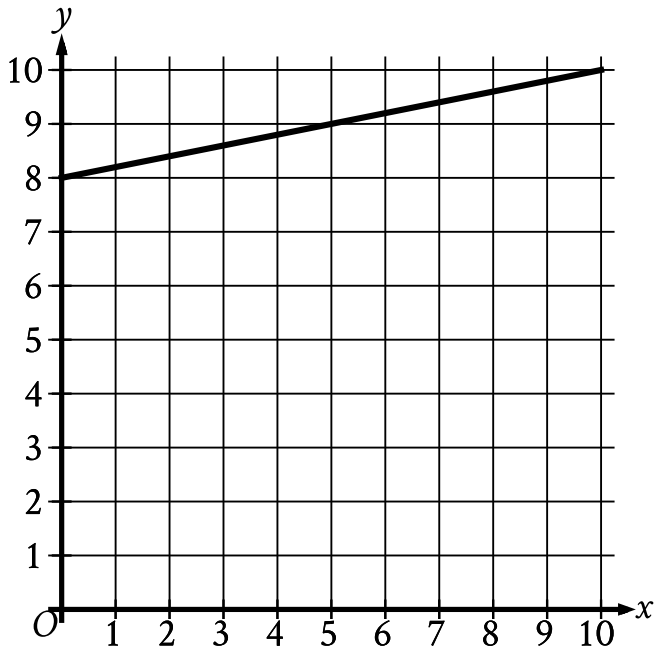
C. $1{,}373$

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. $5.48x$