

Question ID ec0d8652

Assessment	Test	Domain	Skill	Difficulty
PSAT/NMSQT & PSAT 10	Math	Algebra	Linear equations in two variables	<div><div></div><div></div><div></div></div>

ID: ec0d8652

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. $(0, -81)$

ID: ec0d8652 Answer

Correct Answer: A

Rationale

Choice A is correct. In the xy -plane, the graph of an equation in the form $y = mx + b$, where m and b are constants, has a slope of m and a y -intercept of $(0, b)$. Therefore, the y -intercept of the graph of $y = 34x + 81$ is $(0, 81)$.

Choice B is incorrect and may result from conceptual or calculation errors.

Choice C is incorrect and may result from conceptual or calculation errors.

Choice D is incorrect and may result from conceptual or calculation errors.

Question Difficulty: Easy

Question ID 19014c22

Assessment	Test	Domain	Skill	Difficulty
PSAT/NMSQT & PSAT 10	Math	Algebra	Linear equations in two variables	<div><div></div><div></div><div></div></div>

ID: 19014c22

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. $-\frac{1}{45}$

ID: 19014c22 Answer

Correct Answer: A

Rationale

Choice A is correct. It's given that line j is perpendicular to line k in the xy -plane. It follows that the slope of line j is the opposite reciprocal of the slope of line k . The equation for line k is written in slope-intercept form $y = mx + b$, where m is the slope of the line and b is the y -coordinate of the y -intercept of the line. It follows that the slope of line k is 3. The opposite reciprocal of a number is -1 divided by the number. Thus, the opposite reciprocal of 3 is $-\frac{1}{3}$. Therefore, the slope of line j is $-\frac{1}{3}$.

Choice B is incorrect and may result from conceptual or calculation errors.

Choice C is incorrect and may result from conceptual or calculation errors.

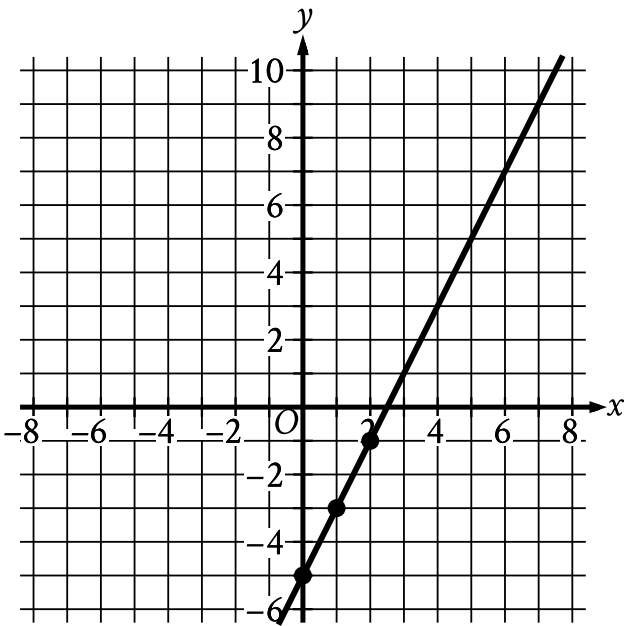
Choice D is incorrect and may result from conceptual or calculation errors.

Question Difficulty: Easy

Question ID 55614835

Assessment	Test	Domain	Skill	Difficulty
PSAT/NMSQT & PSAT 10	Math	Algebra	Linear equations in two variables	<div><div></div><div></div><div></div></div>

ID: 55614835



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

ID: 55614835 Answer

Correct Answer: D

Rationale

Choice D is correct. It's given that the graph shows the linear relationship between x and y . The given graph passes through the points 0, -5, 1, -3, and 2, -1. It follows that when $x = 0$, the corresponding value of y is -5, when $x = 1$, the corresponding value of y is -3, and when $x = 2$, the corresponding value of y is -1. Of the given choices, only the table in choice D gives these three values of x and their corresponding values of y for the relationship shown in the graph.

Choice A is incorrect. This table represents a relationship between x and y such that the graph passes through the points 0, 0, 1, -7, and 2, -9.

Choice B is incorrect. This table represents a relationship between x and y such that the graph passes through the points 0, 0, 1, -3, and 2, -1.

Choice C is incorrect. This table represents a linear relationship between x and y such that the graph passes through the points 0, -5, 1, -7, and 2, -9.

Question Difficulty: Easy

Question ID bc62c9b6

Assessment	Test	Domain	Skill	Difficulty
PSAT/NMSQT & PSAT 10	Math	Algebra	Linear equations in two variables	<div><div></div><div></div><div></div></div>

ID: bc62c9b6

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. $3x + y = 240$

ID: bc62c9b6 Answer

Correct Answer: A

Rationale

Choice A is correct. It's given that for a camping trip a group bought x one-liter bottles of water and y three-liter bottles of water. Since the group bought x one-liter bottles of water, the total number of liters bought from x one-liter bottles of water is represented as $1x$, or x . Since the group bought y three-liter bottles of water, the total number of liters bought from y three-liter bottles of water is represented as $3y$. It's given that the group bought a total of 240 liters; thus, the equation $x + 3y = 240$ represents this situation.

Choice B is incorrect and may result from conceptual errors.

Choice C is incorrect and may result from conceptual errors.

Choice D is incorrect. This equation represents a situation where the group bought x three-liter bottles of water and y one-liter bottles of water, for a total of 240 liters of water.

Question Difficulty: Easy

Question ID 3f2e31bd

Assessment	Test	Domain	Skill	Difficulty
PSAT/NMSQT & PSAT 10	Math	Algebra	Linear equations in two variables	<div><div></div><div></div><div></div></div>

ID: 3f2e31bd

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. $y = 4x + 6$

ID: 3f2e31bd Answer

Correct Answer: D

Rationale

Choice D is correct. A line in the xy -plane with a slope of m and a y -intercept of $0, b$ can be defined by an equation in the form $y = mx + b$. It's given that line r has a slope of 4 and passes through the point $0, 6$. It follows that $m = 4$ and $b = 6$. Substituting 4 for m and 6 for b in the equation $y = mx + b$ yields $y = 4x + 6$. Therefore, the equation $y = 4x + 6$ defines line r .

Choice A is incorrect. This equation defines a line that has a slope of -6, not 4, and passes through the point $0, 4$, not $0, 6$.

Choice B is incorrect. This equation defines a line that has a slope of 6, not 4, and passes through the point $0, 4$, not $0, 6$.

Choice C is incorrect. This equation defines a line that passes through the point $0, -6$, not $0, 6$.

Question Difficulty: Easy

Question ID 843533bc

Assessment	Test	Domain	Skill	Difficulty
PSAT/NMSQT & PSAT 10	Math	Algebra	Linear equations in two variables	<div><div></div><div></div><div></div></div>

ID: 843533bc

$y = x + 4$

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

ID: 843533bc Answer

Correct Answer: A

Rationale

Choice A is correct. Substituting 0 for x into the given equation yields $y = 0 + 4$, or $y = 4$. Therefore, when $x = 0$, the corresponding value of y for the given equation is 4. Substituting 1 for x into the given equation yields $y = 1 + 4$, or $y = 5$. Therefore, when $x = 1$, the corresponding value of y for the given equation is 5. Substituting 2 for x into the given equation yields $y = 2 + 4$, or $y = 6$. Therefore, when $x = 2$, the corresponding value of y for the given equation is 6. Of the choices given, only the table in choice A gives these three values of x and their corresponding values of y for the given equation.

Choice B is incorrect. This table gives three values of x and their corresponding values of y for the equation $y = -x + 6$.

Choice C is incorrect. This table gives three values of x and their corresponding values of y for the equation $y = -x + 2$.

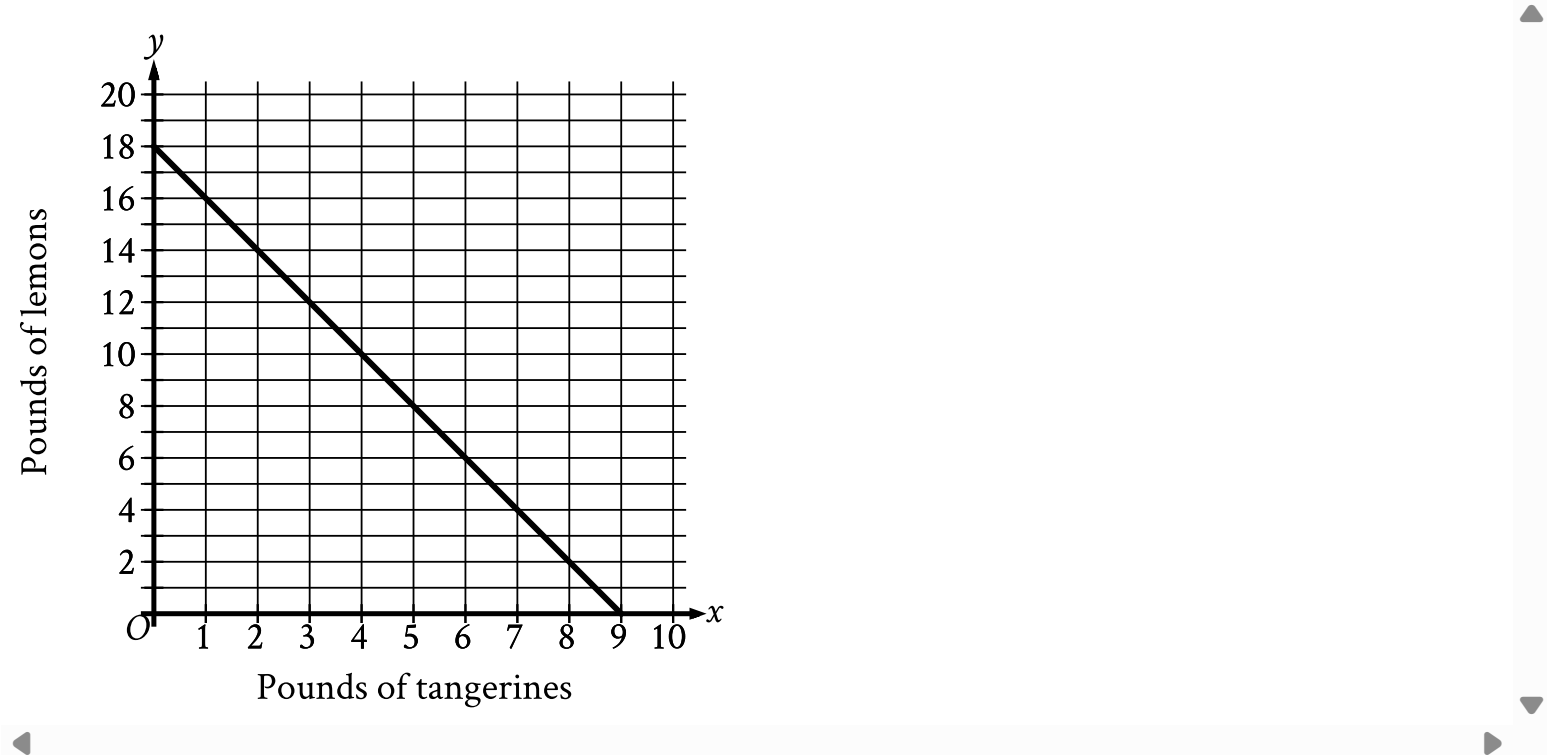
Choice D is incorrect. This table gives three values of x and their corresponding values of y for the equation $y = x$.

Question Difficulty: Easy

Question ID f355fc06

Assessment	Test	Domain	Skill	Difficulty
PSAT/NMSQT & PSAT 10	Math	Algebra	Linear equations in two variables	<div><div></div><div></div><div></div></div>

ID: f355fc06



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

ID: f355fc06 Answer

Correct Answer: B

Rationale

Choice B is correct. It's given that the graph shows the possible combinations of the number of pounds of tangerines, x , and the number of pounds of lemons, y , that could be purchased for \$ 18 at a certain store. If Melvin purchased lemons and 4 pounds of tangerines for a total of \$ 18, the number of pounds of lemons he purchased is represented by the y -coordinate of the point on the graph where $x = 4$. For the graph shown, when $x = 4$, $y = 10$. Therefore, if Melvin purchased lemons and 4 pounds of tangerines for a total of \$ 18, then he purchased 10 pounds of lemons.

Choice A is incorrect. This is the number of pounds of tangerines Melvin purchased if he purchased tangerines and 4 pounds of lemons for a total of \$ 18.

Choice C is incorrect. This is the number of pounds of lemons Melvin purchased if he purchased lemons and 2 pounds of tangerines for a total of \$ 18.

Choice D is incorrect. This is the number of pounds of lemons Melvin purchased if he purchased lemons and 1 pound of tangerines for a total of \$ 18.

Question Difficulty: Easy

Question ID d5a53f84

Assessment	Test	Domain	Skill	Difficulty
PSAT/NMSQT & PSAT 10	Math	Algebra	Linear equations in two variables	<div><div></div><div></div><div></div></div>

ID: d5a53f84

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. ~~$0.04x + 0.48y = 661.76$~~

ID: d5a53f84 Answer

Correct Answer: D

Rationale

Choice D is correct. It’s given that the food truck buys forks for \$ 0.04 each. Therefore, the cost, in dollars, of x forks can be represented by the expression $0.04x$. It’s also given that the food truck buys plates for \$ 0.48 each. Therefore, the cost, in dollars, of y plates can be represented by the expression $0.48y$. Since the total cost of x forks and y plates is \$ 661.76, the equation $0.04x + 0.48y = 661.76$ represents this situation.

Choice A is incorrect and may result from conceptual or calculation errors.

Choice B is incorrect and may result from conceptual or calculation errors.

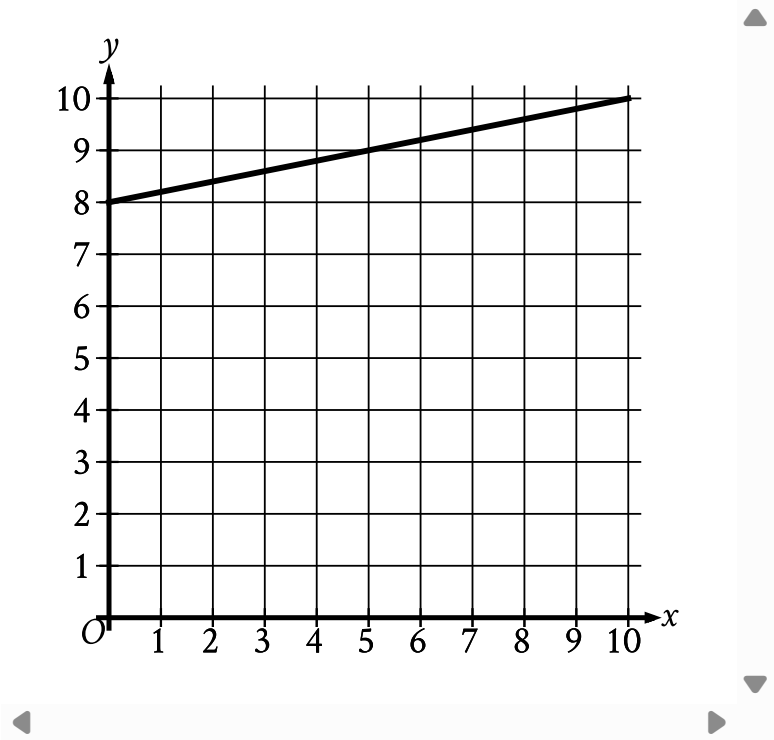
Choice C is incorrect. This equation represents a situation in which the food truck buys forks for \$ 0.48 each and plates for \$ 0.04 each.

Question Difficulty: Easy

Question ID 176d7796

Assessment	Test	Domain	Skill	Difficulty
PSAT/NMSQT & PSAT 10	Math	Algebra	Linear equations in two variables	<div><div></div><div></div><div></div></div>

ID: 176d7796



What is the y-intercept of the line graphed?

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

ID: 176d7796 Answer

Correct Answer: D

Rationale

Choice D is correct. The y-intercept of a line graphed in the xy -plane is the point where the line intersects the y -axis. The line graphed intersects the y -axis at the point $0, 8$. Therefore, the y-intercept of the line graphed is $0, 8$.

Choice A is incorrect and may result from conceptual errors.

Choice B is incorrect and may result from conceptual errors.

Choice C is incorrect and may result from conceptual errors.

Question Difficulty: Easy

Question ID 8b6409ac

Assessment	Test	Domain	Skill	Difficulty
PSAT/NMSQT & PSAT 10	Math	Algebra	Linear equations in two variables	<div><div></div><div></div><div></div></div>

ID: 8b6409ac

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**

ID: 8b6409ac Answer

Correct Answer: C

Rationale

Choice C is correct. Let d represent the mass, in grams, of vitamin D in the mixture, and let c represent the mass, in grams, of calcium in the mixture. It's given that the mixture consists of only vitamin D and calcium and that the total mass of the mixture is 150 grams. Therefore, the equation $d + c = 150$ represents this situation. It's also given that the mass of vitamin D in the mixture is 50 grams. Substituting 50 for d in the equation $d + c = 150$ yields $50 + c = 150$. Subtracting 50 from both sides of this equation yields $c = 100$. Therefore, the mass of calcium in the mixture is 100 grams.

Choice A is incorrect and may result from conceptual or calculation errors.

Choice B is incorrect. This is the total mass, in grams, of the mixture, not the mass, in grams, of calcium in the mixture.

Choice D is incorrect. This is the mass, in grams, of vitamin D in the mixture, not the mass, in grams, of calcium in the mixture.

Question Difficulty: Easy

Question ID aae8b8c7

Assessment	Test	Domain	Skill	Difficulty
PSAT/NMSQT & PSAT 10	Math	Algebra	Linear equations in two variables	<div><div></div><div></div><div></div></div>

ID: aae8b8c7

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**

ID: aae8b8c7 Answer

Correct Answer: D

Rationale

Choice D is correct. It's given that the shipment consists of 5-pound boxes and 10-pound boxes with a total weight of 220 pounds. Let x represent the number of 5-pound boxes and y represent the number of 10-pound boxes in the shipment. Therefore, the equation $5x + 10y = 220$ represents this situation. It's given that there are 13 10-pound boxes in the shipment. Substituting 13 for y in the equation $5x + 10y = 220$ yields $5x + 10(13) = 220$, or $5x + 130 = 220$. Subtracting 130 from both sides of this equation yields $5x = 90$. Dividing both sides of this equation by 5 yields 18. Thus, there are 18 5-pound boxes in the shipment.

Choice A is incorrect and may result from conceptual or calculation errors.

Choice B is incorrect and may result from conceptual or calculation errors.

Choice C is incorrect. This is the number of 10-pound boxes in the shipment.

Question Difficulty: Easy

Question ID 57622fc3

Assessment	Test	Domain	Skill	Difficulty
PSAT/NMSQT & PSAT 10	Math	Algebra	Linear equations in two variables	<div><div></div><div></div><div></div></div>

ID: 57622fc3

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**

ID: 57622fc3 Answer

Correct Answer: B

Rationale

Choice B is correct. It’s given that the equation $x + y = 1,440$ represents the number of minutes of daylight, x , and the number of minutes of non-daylight, y , on a particular day in Oak Park, Illinois. It’s also given that this day has 670 minutes of daylight. Substituting 670 for x in the equation $x + y = 1,440$ yields $670 + y = 1,440$. Subtracting 670 from both sides of this equation yields $y = 770$. Therefore, this day has 770 minutes of non-daylight.

Choice A is incorrect. This is the number of minutes of daylight, not non-daylight, on this day.

Choice C is incorrect and may result from conceptual or calculation errors.

Choice D is incorrect. This is the total number of minutes of daylight and non-daylight.

Question Difficulty: Easy

Question ID f3e46b78

Assessment	Test	Domain	Skill	Difficulty
PSAT/NMSQT & PSAT 10	Math	Algebra	Linear equations in two variables	<div><div></div><div></div><div></div></div>

ID: f3e46b78

$y = 70x + 8$

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

ID: f3e46b78 Answer

Correct Answer: A

Rationale

Choice A is correct. Each of the given choices gives three values of x : 0, 2, and 4. Substituting 0 for x in the given equation yields $y = 700 + 8$, or $y = 8$. Therefore, when $x = 0$, the corresponding value of y for the given equation is 8. Substituting 2 for x in the given equation yields $y = 702 + 8$, or $y = 148$. Therefore, when $x = 2$, the corresponding value of y for the given equation is 148. Substituting 4 for x in the given equation yields $y = 704 + 8$, or $y = 288$. Therefore, when $x = 4$, the corresponding value of y for the given equation is 288. Thus, if the three values of x are 0, 2, and 4, then their corresponding values of y are 8, 148, and 288, respectively, for the given equation.

Choice B is incorrect. This table gives three values of x and their corresponding values of y for the equation $y = 4x + 70$.

Choice C is incorrect and may result from conceptual or calculation errors.

Choice D is incorrect and may result from conceptual or calculation errors.

Question Difficulty: Easy

Question ID e3672617

Assessment	Test	Domain	Skill	Difficulty
PSAT/NMSQT & PSAT 10	Math	Algebra	Linear equations in two variables	<div><div></div><div></div><div></div></div>

ID: e3672617

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 ?

ID: e3672617 Answer

Correct Answer: 14

Rationale

The correct answer is 14. It's given that the equation $46 = 2a + 2b$ gives the relationship between the side lengths a and b of a certain parallelogram. Substituting 9 for a in the given equation yields $46 = 2(9) + 2b$, or $46 = 18 + 2b$. Subtracting 18 from both sides of this equation yields $28 = 2b$. Dividing both sides of this equation by 2 yields $14 = b$. Therefore, if $a = 9$, the value of b is 14.

Question Difficulty: Easy

Question ID 9b145590

Assessment	Test	Domain	Skill	Difficulty
PSAT/NMSQT & PSAT 10	Math	Algebra	Linear equations in two variables	<div><div></div><div></div><div></div></div>

ID: 9b145590

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. $30.7x + 24.3y = 46.1$

ID: 9b145590 Answer

Correct Answer: B

Rationale

Choice B is correct. It's given that the employee takes 1.5 minutes to prepare a sandwich. Multiplying 1.5 by the number of sandwiches, x , yields $1.5x$, the amount of time the employee spends preparing x sandwiches. It's also given that the employee takes 1.9 minutes to prepare a salad. Multiplying 1.9 by the number of salads, y , yields $1.9y$, the amount of time the employee spends preparing y salads. It follows that the total amount of time, in minutes, the employee spends preparing x sandwiches and y salads is $1.5x + 1.9y$. It's given that the employee spends a total of 46.1 minutes preparing x sandwiches and y salads. Thus, the equation $1.5x + 1.9y = 46.1$ represents this situation.

Choice A is incorrect. This equation represents a situation where it takes the employee 1.9 minutes, rather than 1.5 minutes, to prepare a sandwich and 1.5 minutes, rather than 1.9 minutes, to prepare a salad.

Choice C is incorrect. This equation represents a situation where it takes the employee 1 minute, rather than 1.5 minutes, to prepare a sandwich and 1 minute, rather than 1.9 minutes, to prepare a salad.

Choice D is incorrect. This equation represents a situation where it takes the employee 30.7 minutes, rather than 1.5 minutes, to prepare a sandwich and 24.3 minutes, rather than 1.9 minutes, to prepare a salad.

Question Difficulty: Easy

Question ID b1916547

Assessment	Test	Domain	Skill	Difficulty
PSAT/NMSQT & PSAT 10	Math	Algebra	Linear equations in two variables	<div><div></div><div></div><div></div></div>

ID: b1916547

$y = -4x + 40$

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

ID: b1916547 Answer

Correct Answer: C

Rationale

Choice C is correct. Each of the given choices gives three values of x : 0, 1, and 2. Substituting 0 for x in the given equation yields $y = -40 + 40$, or $y = 40$. Therefore, when $x = 0$, the corresponding value of y for the given equation is 40. Substituting 1 for x in the given equation yields $y = -41 + 40$, or $y = 36$. Therefore, when $x = 1$, the corresponding value of y for the given equation is 36. Substituting 2 for x in the given equation yields $y = -42 + 40$, or $y = 32$. Therefore, when $x = 2$, the corresponding value of y for the given equation is 32. Choice C gives three values of x , 0, 1, and 2, and their corresponding values of y , 40, 36, and 32, respectively, for the given equation.

Choice A is incorrect. This table gives three values of x and their corresponding values of y for the equation $y = -4x$.

Choice B is incorrect. This table gives three values of x and their corresponding values of y for the equation $y = 4x + 40$.

Choice D is incorrect. This table gives three values of x and their corresponding values of y for the equation $y = 4x$.

Question Difficulty: Easy

Question ID 4fc5a7d2

Assessment	Test	Domain	Skill	Difficulty
PSAT/NMSQT & PSAT 10	Math	Algebra	Linear equations in two variables	<div><div></div><div></div><div></div></div>

ID: 4fc5a7d2

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. $y = \frac{1}{2}x + 3$

ID: 4fc5a7d2 Answer

Correct Answer: B

Rationale

Choice B is correct. A line in the xy -plane with a slope of m and a y -intercept of $0, b$ can be represented by the equation $y = mx + b$. It's given that the line has a slope of $-\frac{1}{2}$. Therefore, $m = -\frac{1}{2}$. It's also given that the line passes through the point $0, 3$. Therefore, $b = 3$. Substituting $-\frac{1}{2}$ for m and 3 for b in the equation $y = mx + b$ yields $y = -\frac{1}{2}x + 3$. Therefore, the equation $y = -\frac{1}{2}x + 3$ represents this line.

Choice A is incorrect. This equation represents a line in the xy -plane that passes through the point $0, -3$, not $0, 3$.

Choice C is incorrect. This equation represents a line in the xy -plane that has a slope of $\frac{1}{2}$, not $-\frac{1}{2}$, and passes through the point $0, -3$, not $0, 3$.

Choice D is incorrect. This equation represents a line in the xy -plane that has a slope of $\frac{1}{2}$, not $-\frac{1}{2}$.

Question Difficulty: Easy

Question ID dd181f54

Assessment	Test	Domain	Skill	Difficulty
PSAT/NMSQT & PSAT 10	Math	Algebra	Linear equations in two variables	<div><div></div><div></div><div></div></div>

ID: dd181f54

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**

ID: dd181f54 Answer

Correct Answer: A

Rationale

Choice A is correct. Let x represent the number of rabbit snails that Naomi bought. It’s given that each rabbit snail costs \$ 8. Therefore, the total cost, in dollars, of the rabbit snails that Naomi bought can be represented by the expression $8x$. It’s also given that each nerite snail costs \$ 6, and that Naomi bought 2 nerite snails. Therefore, the total cost, in dollars, of the nerite snails that Naomi bought is 62, or 12. Since Naomi bought both the rabbit snails and the nerite snails for a total of \$ 52, the equation $8x + 12 = 52$ can be used to represent the situation. Subtracting 12 from both sides of this equation yields $8x = 40$. Dividing both sides of this equation by 8 yields $x = 5$. Therefore, Naomi bought 5 rabbit snails.

Choice B is incorrect. This is the total cost, in dollars, of the nerite snails that Naomi bought, not the number of rabbit snails.

Choice C is incorrect. This is the cost, in dollars, of one rabbit snail and one nerite snail, not the number of rabbit snails that Naomi bought.

Choice D is incorrect and may result from conceptual or calculation errors.

Question Difficulty: Easy

Question ID b32ff819

Assessment	Test	Domain	Skill	Difficulty
PSAT/NMSQT & PSAT 10	Math	Algebra	Linear equations in two variables	<div><div></div><div></div><div></div></div>

ID: b32ff819

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.

ID: b32ff819 Answer

Correct Answer: A

Rationale

Choice A is correct. It's given that 364 paper straws of equal length were used to construct triangles and rectangles, where no two polygons had a common side. It's also given that the equation $3x + 4y = 364$ represents this situation, where x is the number of triangles constructed and y is the number of rectangles constructed. The equation $x, y = 24, 73$ means that if $x = 24$, then $y = 73$. Substituting 24 for x and 73 for y in $3x + 4y = 364$ yields $3(24) + 4(73) = 364$, or $364 = 364$, which is true. Therefore, in this context, the equation $x, y = 24, 73$ means that if 24 triangles were constructed, then 73 rectangles were constructed.

Choice B is incorrect and may result from conceptual errors.

Choice C is incorrect and may result from conceptual errors.

Choice D is incorrect and may result from conceptual errors.

Question Difficulty: Easy