

# Question ID a229cabe

| Assessment           | Test | Domain  | Skill                                            | Difficulty                                   |
|----------------------|------|---------|--------------------------------------------------|----------------------------------------------|
| PSAT/NMSQT & PSAT 10 | Math | Algebra | Systems of two linear equations in two variables | <div><div></div><div></div><div></div></div> |

ID: a229cabe

$$\begin{aligned}8x + y &= 5 \\ y &= 9x + 1\end{aligned}$$

The solution to the given system of equations is  $(x, y)$ . What is the value of  $x$ ?

- A.  $-6$
- B.  $\frac{4}{17}$
- C.  $\frac{6}{17}$
- D.  $4$

# Question ID a6ab27d1

| Assessment           | Test | Domain  | Skill                                            | Difficulty                                   |
|----------------------|------|---------|--------------------------------------------------|----------------------------------------------|
| PSAT/NMSQT & PSAT 10 | Math | Algebra | Systems of two linear equations in two variables | <div><div></div><div></div><div></div></div> |

ID: a6ab27d1

$$\begin{aligned}y &= 3x \\ 2x + y &= 12\end{aligned}$$

The solution to the given system of equations is  $(x, y)$ . What is the value of  $5x$ ?

- A. 24
- B. 15
- C. 12
- D. 5

Question ID 45f00d75

| Assessment           | Test | Domain  | Skill                                            | Difficulty                                   |
|----------------------|------|---------|--------------------------------------------------|----------------------------------------------|
| PSAT/NMSQT & PSAT 10 | Math | Algebra | Systems of two linear equations in two variables | <div><div></div><div></div><div></div></div> |

ID: 45f00d75

$y - 9x = 13$

$5x = 2y$

What is the solution  $(x, y)$  to the given system of equations?

- A.  $(\frac{5}{2}, 1)$
- B.  $(1, \frac{2}{5})$
- C.  $(-2, -5)$
- D.  $(-5, -2)$

# Question ID b882793f

| Assessment           | Test | Domain  | Skill                                            | Difficulty                                   |
|----------------------|------|---------|--------------------------------------------------|----------------------------------------------|
| PSAT/NMSQT & PSAT 10 | Math | Algebra | Systems of two linear equations in two variables | <div><div></div><div></div><div></div></div> |

ID: b882793f

$$y = 2x + 10$$
$$y = 2x - 1$$

At how many points do the graphs of the given equations intersect in the  $xy$ -plane?

- A. Zero
- B. Exactly one
- C. Exactly two
- D. Infinitely many

Question ID d0d3c29c

| Assessment           | Test | Domain  | Skill                                            | Difficulty                                   |
|----------------------|------|---------|--------------------------------------------------|----------------------------------------------|
| PSAT/NMSQT & PSAT 10 | Math | Algebra | Systems of two linear equations in two variables | <div><div></div><div></div><div></div></div> |

ID: d0d3c29c

$$\begin{aligned}y &= -3x \\ 4x + y &= 15\end{aligned}$$

The solution to the given system of equations is  $(x, y)$ . What is the value of  $x$ ?

- A. 1
- B. 5
- C. 15
- D. 45

Question ID a5aa159f

| Assessment           | Test | Domain  | Skill                                            | Difficulty                                   |
|----------------------|------|---------|--------------------------------------------------|----------------------------------------------|
| PSAT/NMSQT & PSAT 10 | Math | Algebra | Systems of two linear equations in two variables | <div><div></div><div></div><div></div></div> |

ID: a5aa159f

$$6x + 7y = 28$$

$$2x + 2y = 10$$

The solution to the given system of equations is  $(x, y)$ . What is the value of  $y$ ?

- A.  $-2$
- B.  $7$
- C.  $14$
- D.  $18$

Question ID 4b153444

| Assessment           | Test | Domain  | Skill                                            | Difficulty                                   |
|----------------------|------|---------|--------------------------------------------------|----------------------------------------------|
| PSAT/NMSQT & PSAT 10 | Math | Algebra | Systems of two linear equations in two variables | <div><div></div><div></div><div></div></div> |

ID: 4b153444

$$\begin{aligned}5x &= 15 \\ -4x + y &= -2\end{aligned}$$

The solution to the given system of equations is  $(x, y)$ . What is the value of  $x + y$ ?

- A.  $-17$
- B.  $-13$
- C.  $13$
- D.  $17$

Question ID 51105ab7

| Assessment           | Test | Domain  | Skill                                            | Difficulty                                   |
|----------------------|------|---------|--------------------------------------------------|----------------------------------------------|
| PSAT/NMSQT & PSAT 10 | Math | Algebra | Systems of two linear equations in two variables | <div><div></div><div></div><div></div></div> |

ID: 51105ab7

$$\begin{aligned}y &= -\frac{1}{5}x \\ y &= \frac{1}{7}x\end{aligned}$$

The solution to the given system of equations is  $(x, y)$ . What is the value of  $x$ ?

- A.  $-5$
- B.  $0$
- C.  $2$
- D.  $7$

Question ID e5b7b067

| Assessment           | Test | Domain  | Skill                                            | Difficulty                                   |
|----------------------|------|---------|--------------------------------------------------|----------------------------------------------|
| PSAT/NMSQT & PSAT 10 | Math | Algebra | Systems of two linear equations in two variables | <div><div></div><div></div><div></div></div> |

ID: e5b7b067

$$\begin{aligned} 4x &= 20 \\ -3x + y &= -7 \end{aligned}$$

The solution to the given system of equations is  $(x, y)$ . What is the value of  $x + y$ ?

- A.  $-27$
- B.  $-13$
- C.  $13$
- D.  $27$

Question ID 9559faae

| Assessment           | Test | Domain  | Skill                                            | Difficulty                                   |
|----------------------|------|---------|--------------------------------------------------|----------------------------------------------|
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ID: 9559faae

$$\begin{aligned}y &= -\frac{1}{9}x \\ y &= \frac{1}{2}x\end{aligned}$$

The solution to the given system of equations is  $(x, y)$ . What is the value of  $x$ ?

- A.  $-9$
- B.  $-7$
- C.  $0$
- D.  $2$

# Question ID 19e7dacc

| Assessment           | Test | Domain  | Skill                                            | Difficulty                                   |
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ID: 19e7dacc

A company that provides whale-watching tours takes groups of **21** people at a time. The company’s revenue is **80** dollars per adult and **60** dollars per child. If the company’s revenue for one group consisting of adults and children was **1,440** dollars, how many people in the group were children?

- A. **3**
- B. **9**
- C. **12**
- D. **18**

# Question ID 60bac251

| Assessment           | Test | Domain  | Skill                                            | Difficulty                                   |
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ID: 60bac251

$$x + 3y = 29$$

$$3y = 11$$

The solution to the given system of equations is  $(x, y)$ . What is the value of  $x$ ?

# Question ID bb0ac882

| Assessment           | Test | Domain  | Skill                                            | Difficulty                                   |
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ID: bb0ac882

At how many points do the graphs of the equations  $y = x + 20$  and  $y = 8x$  intersect in the  $xy$ -plane?

- A. 0
- B. 1
- C. 2
- D. 8