# Question ID df8ae774

| Assessment | Test | Domain | Skill | Difficulty |
|---|---|---|---|---|
| SAT | Math | Algebra | Linear equations in one variable | Hard |

**ID: df8ae774**

$$3(kx+13)=\frac{48}{17}x+36$$

In the given equation, $k$ is a constant. The equation has no solution. What is the value of $k$?

# Question ID 70474bfb

| Assessment | Test | Domain | Skill | Difficulty |
|---|---|---|---|---|
| SAT | Math | Algebra | Linear equations in one variable | Hard |

**ID: 70474bfb**

Each side of a $30$-sided polygon has one of three lengths. The number of sides with length $8$ centimeters $(\text{cm})$ is $5$ times the number of sides $n$ with length $3$ cm. There are $6$ sides with length $4$ cm. Which equation must be true for the value of $n$ ?

A. $5n + 6 = 30$

B. $6n + 6 = 30$

C. $8n + 3n + 4n = 30$

D. $8(5n) + 3n + 4(6) = 30$

# Question ID be844d92

| Assessment | Test | Domain | Skill | Difficulty |
|---|---|---|---|---|
| SAT | Math | Algebra | Linear equations in one variable | Hard |

**ID: be844d92**

What value of $t$ is the solution to the equation $0.8t - 0.46 = 8(t - 0.001) + 1.9$?

# Question ID d55d1acd

| Assessment | Test | Domain | Skill | Difficulty |
|---|---|---|---|---|
| SAT | Math | Algebra | Linear equations in one variable | Hard |

**ID: d55d1acd**

If $\frac{x-5}{7} = \frac{x-5}{9}$, the value of $x - 5$ is between which of the following pairs of values?

A. $-9$ and $-7$

B. $-3$ and $3$

C. $4.5$ and $5.5$

D. $6.75$ and $9.25$

# Question ID 2a366aeb

| Assessment | Test | Domain | Skill | Difficulty |
|---|---|---|---|---|
| SAT | Math | Algebra | Linear equations in one variable | Hard |

**ID: 2a366aeb**

A manufacturing plant makes $10$-inch, $9$-inch, and $7$-inch frying pans. During a certain day, the number of $10$-inch frying pans that the manufacturing plant makes is $4$ times the number $n$ of $9$-inch frying pans it makes, and the number of $7$-inch frying pans it makes is $10$. During this day, the manufacturing plant makes $100$ frying pans total. Which equation represents this situation?

A. $10(4n) + 9n + 7(10) = 100$

B. $10n + 9n + 7n = 100$

C. $4n + 10 = 100$

D. $5n + 10 = 100$

# Question ID d5f06835

| Assessment | Test | Domain | Skill | Difficulty |
|---|---|---|---|---|
| SAT | Math | Algebra | Linear equations in one variable | Hard |

ID: d5f06835

$$\frac{12x+28}{4} - \frac{s}{13} = r(x-8)$$

In the given equation, $s$ and $r$ are constants, and $s > 0$. If the equation has infinitely many solutions, what is the value of $s$?

# Question ID e96acc98

| Assessment | Test | Domain | Skill | Difficulty |
|---|---|---|---|---|
| SAT | Math | Algebra | Linear equations in one variable | Hard |

**ID: e96acc98**

$$5(t+3)-7(t+3)=38$$

What value of $t$ is the solution to the given equation?

# Question ID dc1b988f

| Assessment | Test | Domain | Skill | Difficulty |
|---|---|---|---|---|
| SAT | Math | Algebra | Linear equations in one variable | Hard |

**ID: dc1b988f**

A factory makes $9$-inch, $7$-inch, and $4$-inch concrete screws. During a certain day, the number of $9$-inch concrete screws that the factory makes is $5$ times the number $n$ of $7$-inch concrete screws, and the number of $4$-inch concrete screws is $22$. During this day, the factory makes $100$ concrete screws total. Which equation represents this situation?

A. $9(5n) + 7n + 4(22) = 100$

B. $9n + 7n + 4n = 100$

C. $5n + 22 = 100$

D. $6n + 22 = 100$

# Question ID 370ac92d

| Assessment | Test | Domain | Skill | Difficulty |
|---|---|---|---|---|
| SAT | Math | Algebra | Linear equations in one variable | Hard |

**ID: 370ac92d**

$$-49x = -98x$$

How many solutions does the given equation have?

A. Zero

B. Exactly one

C. Exactly two

D. Infinitely many

# Question ID b7305783

| Assessment | Test | Domain | Skill | Difficulty |
|---|---|---|---|---|
| SAT | Math | Algebra | Linear equations in one variable | Hard |

**ID: b7305783**

If $\frac{x+6}{3} = \frac{x+6}{13}$, the value of $x + 6$ is between which of the following pairs of values?

A. $-7$ and $-3$

B. $-2$ and $2$

C. $2$ and $7$

D. $8$ and $13$

# Question ID bd12c0bd

| Assessment | Test | Domain | Skill | Difficulty |
|---|---|---|---|---|
| SAT | Math | Algebra | Linear equations in one variable | Hard |

**ID: bd12c0bd**

How many solutions does the equation $10(15x - 9) = -15(6 - 10x)$ have?

A. Exactly one

B. Exactly two

C. Infinitely many

D. Zero

# Question ID 1c5a62e1

| Assessment | Test | Domain | Skill | Difficulty |
|---|---|---|---|---|
| SAT | Math | Algebra | Linear equations in one variable | Hard |

**ID: 1c5a62e1**

$$2(kx - n) = -\frac{28}{15}x - \frac{36}{19}$$

In the given equation, $k$ and $n$ are constants and $n > 1$. The equation has no solution. What is the value of $k$?

# Question ID 07d65258

| Assessment | Test | Domain | Skill | Difficulty |
|---|---|---|---|---|
| SAT | Math | Algebra | Linear equations in one variable | Hard |

**ID: 07d65258**

$$-3x + 21px = 84$$

In the given equation, $p$ is a constant. The equation has no solution. What is the value of $p$?

A. $0$

B. $\frac{1}{7}$

C. $\frac{4}{3}$

D. $4$

# Question ID 9dc82916

| Assessment | Test | Domain | Skill | Difficulty |
|---|---|---|---|---|
| SAT | Math | Algebra | Linear equations in one variable | Hard |

**ID: 9dc82916**

How many solutions does the equation $12(x-3)=-3(x+12)$ have?

A. Exactly one

B. Exactly two

C. Infinitely many

D. Zero

# Question ID e3f4c118

| Assessment | Test | Domain | Skill | Difficulty |
|---|---|---|---|---|
| SAT | Math | Algebra | Linear equations in one variable | Hard |

**ID: e3f4c118**

If $5 - 7(2 - 4x) = 16 - 8(2 - 4x)$, what is the value of $2 - 4x$?