

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 (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 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 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 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
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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 $2 - 4x$?