

Question ID 8bb5aaf8

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

ID: 8bb5aaf8

If $3x - 27 = 24$, what is the value of $x - 9$?

- A. 1
- B. 8
- C. 24
- D. 35

Question ID 1cc17260

Assessment	Test	Domain	Skill	Difficulty
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ID: 1cc17260

$$2x + 16 = a(x + 8)$$

In the given equation, *a* is a constant. If the equation has infinitely many solutions, what is the value of *a*?

Question ID 3b188791

Assessment	Test	Domain	Skill	Difficulty
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ID: 3b188791

$$3x + 21 = 3x + k$$

In the given equation, k is a constant. The equation has infinitely many solutions. What is the value of k ?

Question ID d31c0757

Assessment	Test	Domain	Skill	Difficulty
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ID: d31c0757

If $\frac{x}{8} = 5$, what is the value of $\frac{8}{x}$?

Question ID a4b53a50

Assessment	Test	Domain	Skill	Difficulty
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ID: a4b53a50

$66x = 66x$

How many solutions does the given equation have?

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

Question ID 11436130

Assessment	Test	Domain	Skill	Difficulty
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ID: 11436130

The perimeter of an isosceles triangle is **36** feet. Each of the two congruent sides of the triangle has a length of **10** feet. What is the length, in feet, of the third side?

- A. **10**
- B. **12**
- C. **16**
- D. **18**

Question ID c71c5c71

Assessment	Test	Domain	Skill	Difficulty
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ID: c71c5c71

Nasir bought **9** storage bins that were each the same price. He used a coupon for **\$63** off the entire purchase. The cost for the entire purchase after using the coupon was **\$27**. What was the original price, in dollars, for **1** storage bin?

Question ID 49785a71

Assessment	Test	Domain	Skill	Difficulty
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ID: 49785a71

$$4x + 12 = \frac{a(x+3)}{2}$$

In the given equation, *a* is a constant. If the equation has infinitely many solutions, what is the value of *a*?

- A. 0
- B. 3
- C. 8
- D. 12

Question ID 02e51c3d

Assessment	Test	Domain	Skill	Difficulty
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ID: 02e51c3d

A manager is responsible for ordering supplies for a shaved ice shop. The shop's inventory starts with **4,500** paper cups, and the manager estimates that **70** of these paper cups are used each day. Based on this estimate, in how many days will the supply of paper cups reach **1,700**?

- A. **20**
- B. **40**
- C. **60**
- D. **80**

Question ID 3c94b861

Assessment	Test	Domain	Skill	Difficulty
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ID: 3c94b861

A candle is made of **17** ounces of wax. When the candle is burning, the amount of wax in the candle decreases by **1** ounce every **4** hours. If **6** ounces of wax remain in this candle, for how many hours has it been burning?

- A. **3**
- B. **6**
- C. **24**
- D. **44**

Question ID da845af8

Assessment	Test	Domain	Skill	Difficulty
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ID: da845af8

$7(2x - 3) = 63$

Which equation has the same solution as the given equation?

- A. $2x - 3 = 9$
- B. $2x - 3 = 56$
- C. $2x - 21 = 63$
- D. $2x - 21 = 70$

Question ID 159b76a4

Assessment	Test	Domain	Skill	Difficulty
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ID: 159b76a4

A line segment that has a length of **115 centimeters (cm)** is divided into three parts. One part is **47 cm** long. The other two parts have lengths that are equal to each other. What is the length, in **cm**, of one of the other two parts of equal length?

Question ID b9890078

Assessment	Test	Domain	Skill	Difficulty
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ID: b9890078

A rocket contained **467,000** kilograms (kg) of propellant before launch. Exactly **21** seconds after launch, **362,105** kg of this propellant remained. On average, approximately how much propellant, in kg, did the rocket burn each second after launch?

- A. **4,995**
- B. **17,243**
- C. **39,481**
- D. **104,895**

Question ID 8e92a0bc

Assessment	Test	Domain	Skill	Difficulty
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ID: 8e92a0bc

$$\frac{1}{4}(x + 5) - \frac{1}{3}(x + 5) = -7$$

What value of x is the solution to the given equation?

- A. -12
- B. -5
- C. 79
- D. 204