

Question ID 0cec7ab3

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Algebra	Linear equations in one variable	Medium

ID: 0cec7ab3

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 df89e027

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Algebra	Linear equations in one variable	Medium

ID: df89e027

The perimeter of an isosceles triangle is **83** inches. Each of the two congruent sides of the triangle has a length of **24** inches. What is the length, in inches, of the third side?

Question ID 45085bc8

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Algebra	Linear equations in one variable	Medium

ID: 45085bc8

3 more than 8 times a number x is equal to 83. Which equation represents this situation?

- A. $(3)(8)x = 83$
- B. $8x = 83 + 3$
- C. $3x + 8 = 83$
- D. $8x + 3 = 83$

Question ID b2426806

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Algebra	Linear equations in one variable	Medium

ID: b2426806

If $2 + x = 60$, what is the value of $16 + 8x$?

Question ID ecad178b

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Algebra	Linear equations in one variable	Medium

ID: ecad178b

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 e5485d14

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Algebra	Linear equations in one variable	Medium

ID: e5485d14

If $4x = 3$, what is the value of $24x$?

- A. $\frac{9}{2}$
- B. 6
- C. 18
- D. 72

Question ID 482d48d4

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Algebra	Linear equations in one variable	Medium

ID: 482d48d4

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

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

Question ID c8160a03

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Algebra	Linear equations in one variable	Medium

ID: c8160a03

If $4x - 28 = -24$, what is the value of $x - 7$?

- A. -24
- B. -22
- C. -6
- D. -1

Question ID 464e9c5b

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Algebra	Linear equations in one variable	Medium

ID: 464e9c5b

John paid a total of **\$165** for a microscope by making a down payment of **\$37** plus *p* monthly payments of **\$16** each. Which of the following equations represents this situation?

- A. $16p - 37 = 165$
- B. $37p - 16 = 165$
- C. $16p + 37 = 165$
- D. $37p + 16 = 165$

Question ID f98ae0c1

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Algebra	Linear equations in one variable	Medium

ID: f98ae0c1

$2.6 + x = 2.8$

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

Question ID d27694f4

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Algebra	Linear equations in one variable	Medium

ID: d27694f4

What value of x is the solution to the equation $16x + 24 = 24x$?

- A. -4
- B. $\frac{3}{10}$
- C. $\frac{1}{3}$
- D. 3

Question ID 409c8260

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Algebra	Linear equations in one variable	Medium

ID: 409c8260

$3x + 5(x + 4) = 76$

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

- A. 7
- B. 8
- C. 56
- D. 72

Question ID 74e1e65a

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Algebra	Linear equations in one variable	Medium

ID: 74e1e65a

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 f92d3827

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Algebra	Linear equations in one variable	Medium

ID: f92d3827

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 f7b8c675

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Algebra	Linear equations in one variable	Medium

ID: f7b8c675

$8x - 7x + 130 = 260$

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

Question ID 3c1e4fac

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Algebra	Linear equations in one variable	Medium

ID: 3c1e4fac

If $6 + x = 9$, what is the value of $18 + 3x$?

Question ID 89e1a0ac

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Algebra	Linear equations in one variable	Medium

ID: 89e1a0ac

If $4x + 2 = 12$, what is the value of $16x + 8$?

- A. 40
- B. 48
- C. 56
- D. 60

Question ID cd6f35a5

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Algebra	Linear equations in one variable	Medium

ID: cd6f35a5

If $2x = 12$, what is the value of $9x$?

Question ID 0261dcc4

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Algebra	Linear equations in one variable	Medium

ID: 0261dcc4

If $6n = 12$, what is the value of $n + 4$?

Question ID 53f75a3e

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Algebra	Linear equations in one variable	Medium

ID: 53f75a3e

If $8x = 6$, what is the value of $72x$?

- A. 3
- B. 15
- C. 54
- D. 57

Question ID 32f51e96

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Algebra	Linear equations in one variable	Medium

ID: 32f51e96

If $3x - 8 = 7$, what is the value of $3x + 8$?

- A. -1
- B. 5
- C. 13
- D. 23

Question ID 10f4c0f4

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Algebra	Linear equations in one variable	Medium

ID: 10f4c0f4

If $2x + 3 = 9$, what is the value of $6x - 1$?

Question ID 3d3f6745

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Algebra	Linear equations in one variable	Medium

ID: 3d3f6745

$7(2x - 3) = 63$

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 50dc6fcf

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Algebra	Linear equations in one variable	Medium

ID: 50dc6fcf

$13x = 112 - x$

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

Question ID 35c55df9

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Algebra	Linear equations in one variable	Medium

ID: 35c55df9

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

Question ID 7b80d37c

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Algebra	Linear equations in one variable	Medium

ID: 7b80d37c

A gym charges its members a onetime **\$36** enrollment fee and a membership fee of **\$19** per month. If there are no charges other than the enrollment fee and the membership fee, after how many months will a member have been charged a total of **\$188** at the gym?

- A. **4**
- B. **5**
- C. **8**
- D. **10**