It's About the Real World

Instead of testing you on every math topic there is, the PSAT 8/9 asks you to use the math that you'll rely on most in all sorts of situations. Questions on the Math Test are designed to mirror the problem solving and modeling you'll do in:

- College math, science, and social science courses
- The jobs that you hold
- Your personal life

What the Math Test Measures

Fluency

The Math Test is a chance to show that you:

- Carry out procedures flexibly, accurately, efficiently, and strategically.
- Solve problems quickly by identifying and using the most efficient solution approaches. This might involve solving a problem by inspection, finding a shortcut, or reorganizing the information you've been given.

Conceptual Understanding

You'll demonstrate your grasp of math concepts, operations, and relations. For instance, you might be asked to make connections between properties of linear equations, their graphs, and the contexts they represent.

Applications

These real-world problems ask you to analyze a situation, determine the essential elements required to solve the problem, represent the problem mathematically, and carry out a solution.

Major Features

Category	PSAT 8/9
Total Testing Time	2 hours and 25 minutes

Components	1. Evidence-Based Reading and Writing
	    • Reading Test
	    • Writing and Language Test
	2. Math

Test Length and Timing

PSAT 8/9		
Component	Time Allotted (min.)	Number of Questions/ Tasks
Reading	55	42
Writing and Language	30	40
Math	60	38
Total	145	120

Math Calculator vs. No Calc

Calculator Permitted Section	40 minutes
Calculator Not Permitted Section	20 minutes

Gridding-In Answers

- Mark no more than one circle in any column.
- Only answers indicated by filling in the circle will be scored (you won't receive credit for anything written in the boxes located above the circles).
- It doesn't matter in which column you begin entering their answers; as long as the responses are recorded within the grid area, you'll receive credit.
- The grid can hold only four decimal places and can only accommodate positive numbers and zero.
- Unless a problem indicates otherwise, answers can be entered on the grid as a decimal or a fraction.
- Fractions like $\dfrac{3}{24}$ do not need to be reduced to their lowest terms.
- All mixed numbers need to be converted to improper fractions before being recorded in the grid.
- If the answer is a repeating decimal, students must grid the most accurate value the grid will accommodate.

Below is a sample of the instructions students will see on the test.

Answer: $\dfrac{7}{12}$ Answer: 2.5

Write answer in boxes. → Grid in result.

Fraction line

Decimal point

Answer: 201
Either position is correct.

Acceptable ways to grid $\dfrac{2}{3}$ are:

Sample Problems

1

A real estate broker earns a fixed percentage of the selling price of a house as a commission. The broker sold a house for $278,000 and earned a commission of $16,680. What would the broker's commission be on a house that sells for $324,000?

A) $14,311
B) $19,440
C) $46,000
D) $62,680

Questions 2 and 3 refer to the following information.

The scatterplot below shows the relationship between the speed of a certain vehicle, in miles per hour, and its fuel economy, in miles per gallon.

Vehicle Fuel Economy versus Speed

2

Based on the scatterplot, over which speed intervals, in miles per hour, does the relationship between the speed and fuel economy appear to be negative?

A) 5–25 and 40–50
B) 15–35 and 40–50
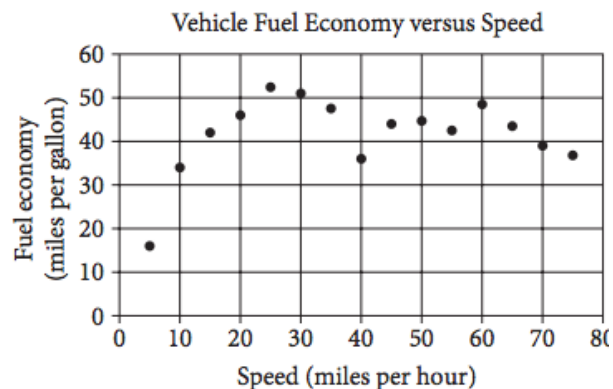C) 20–35, 40–55, and 60–75
D) 25–40, 50–55, and 60–75

3

Based on the trend in the data shown for a car traveling between 5 and 20 miles per hour, which of the following is the best estimate of the fuel economy, in miles per gallon, for the vehicle when it travels 17 miles per hour?

A) 48
B) 44
C) 40
D) 36

4

If $f(x) = 4 - x$ and $g(x) = 2x^2 - 1$, what is the value of $f(1) - g(1)$?

5

What value of x satisfies the equation $x - \dfrac{5}{8} = \dfrac{7}{8}$?
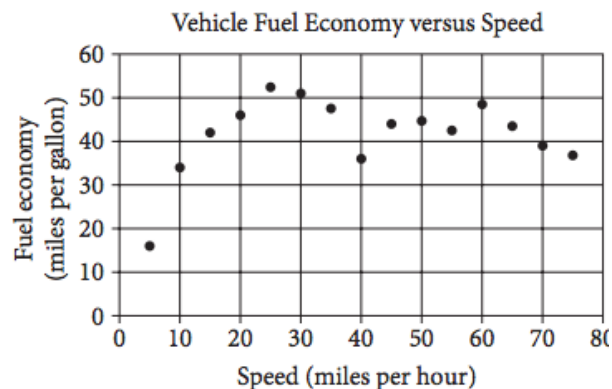
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12/8 or 3/2 or 1.5