

Question ID 10fd67a3

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Ratios, rates, proportional relationships, and units	Medium

ID: 10fd67a3

An object has a mass of **168** grams and a volume of **24** cubic centimeters. What is the density, in grams per cubic centimeter, of the object?

- A. **7**
- B. **144**
- C. **192**
- D. **4,032**

Question ID 34f7cb5d

Assessment	Test	Domain	Skill	Difficulty
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ID: 34f7cb5d

A distance of **354** furlongs is equivalent to how many feet? (**1 furlong = 220 yards and 1 yard = 3 feet**)

- A. **306**
- B. **402**
- C. **25,960**
- D. **233,640**

Question ID 8ce82ad5

Assessment	Test	Domain	Skill	Difficulty
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ID: 8ce82ad5

At a particular track meet, the ratio of coaches to athletes is **1** to **26**. If there are x coaches at the track meet, which of the following expressions represents the number of athletes at the track meet?

- A. $\frac{x}{26}$
- B. $26x$
- C. $x + 26$
- D. $\frac{26}{x}$

Question ID 77c4a10b

Assessment	Test	Domain	Skill	Difficulty
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ID: 77c4a10b

One of a planet's moons orbits the planet every **252** days. A second moon orbits the planet every **287** days. How many more days does it take the second moon to orbit the planet **29** times than it takes the first moon to orbit the planet **29** times?

Question ID 8dd9d75e

Assessment	Test	Domain	Skill	Difficulty
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ID: 8dd9d75e

How many fluid ounces are equivalent to **76** quarts? (**8 fluid ounces = 1 cup and 4 cups = 1 quart**)

Question ID b6843bc7

Assessment	Test	Domain	Skill	Difficulty
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ID: b6843bc7

A triathlon is a multisport race consisting of three different legs. A triathlon participant completed the cycling leg with an average speed of **19.700** miles per hour. What was the average speed, in yards per hour, of the participant during the cycling leg? (**1 mile = 1,760 yards**)

Question ID 664315f9

Assessment	Test	Domain	Skill	Difficulty
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ID: 664315f9

For the values j and k , the ratio of j to k is 11 to 12. If j is multiplied by 17, what is k multiplied by in order to maintain the same ratio?

Question ID 58f4cf97

Assessment	Test	Domain	Skill	Difficulty
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ID: 58f4cf97

An insect moves at a speed of $\frac{3}{20}$ feet per second. What is this speed, in yards per second? (**3 feet = 1 yard**)

- A. $\frac{1}{20}$
- B. $\frac{9}{20}$
- C. **6**
- D. **20**

Question ID e9fe7acd

Assessment	Test	Domain	Skill	Difficulty
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ID: e9fe7acd

A competition consisted of four different events. One participant completed the first event with an average speed of **20.300** miles per hour. What was this average speed, in yards per hour? (**1 mile = 1,760 yards**)

Question ID bf75726f

Assessment	Test	Domain	Skill	Difficulty
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ID: bf75726f

The population density of Cedar County is **230** people per square mile. The county has a population of **85,100** people. What is the area, in square miles, of Cedar County?

Question ID adf742ae

Assessment	Test	Domain	Skill	Difficulty
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ID: adf742ae

If $\frac{x}{y} = 4$ and $\frac{24x}{ny} = 4$, what is the value of n ?

Question ID 82555d76

Assessment	Test	Domain	Skill	Difficulty
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ID: 82555d76

The total mass, in kilograms, of r identical objects is t . Which expression represents the total mass, in kilograms, of $146r$ of these objects?

- A. $146 - t$
- B. $146 + t$
- C. $\frac{t}{146}$
- D. $146t$

Question ID 213aaab1

Assessment	Test	Domain	Skill	Difficulty
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ID: 213aaab1

A distance of **61** furlongs is equivalent to how many feet? (**1 furlong = 220 yards and 1 yard = 3 feet**)

Question ID 3e19942b

Assessment	Test	Domain	Skill	Difficulty
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ID: 3e19942b

A distance of **112** furlongs is equivalent to how many feet? (**1 furlong = 220 yards and 1 yard = 3 feet**)

Question ID f9c3e6a3

Assessment	Test	Domain	Skill	Difficulty
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ID: f9c3e6a3

One side of a flat board has an area of **874** square inches. If a pressure of **19** pounds per square inch of area is exerted on this side of the board, what is the total force, in pounds, exerted on this side of the board?

Question ID d1c59f81

Assessment	Test	Domain	Skill	Difficulty
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ID: d1c59f81

The ratio x to y is equivalent to the ratio 9 to 5. If the value of x is 162, what is the value of y ?

Question ID 128d0947

Assessment	Test	Domain	Skill	Difficulty
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ID: 128d0947

How many tablespoons are equivalent to 14 teaspoons? (**3 teaspoons = 1 tablespoon**)

Question ID ce901565

Assessment	Test	Domain	Skill	Difficulty
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ID: ce901565

The ratio **140** to ***m*** is equivalent to the ratio **4** to **28**. What is the value of ***m***?

Question ID 04943c5d

Assessment	Test	Domain	Skill	Difficulty
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ID: 04943c5d

For a certain rectangular region, the ratio of its length to its width is **35** to **10**. If the width of the rectangular region increases by **7** units, how must the length change to maintain this ratio?

- A. It must decrease by **24.5** units.
- B. It must increase by **24.5** units.
- C. It must decrease by **7** units.
- D. It must increase by **7** units.