# 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 |
|---|---|---|---|---|
| SAT | Math | Problem-Solving and Data Analysis | Ratios, rates, proportional relationships, and units | Medium |

**ID: 34f7cb5d**

A distance of $354$ furlongs is equivalent to how many feet? $(1 \text{ furlong} = 220 \text{ yards and } 1 \text{ yard} = 3 \text{ feet})$

A. $306$

B. $402$

C. $25{,}960$

D. $233{,}640$

# Question ID 8ce82ad5

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

**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 |
|---|---|---|---|---|
| SAT | Math | Problem-Solving and Data Analysis | Ratios, rates, proportional relationships, and units | Medium |

**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 |
|---|---|---|---|---|
| SAT | Math | Problem-Solving and Data Analysis | Ratios, rates, proportional relationships, and units | Medium |

**ID: 8dd9d75e**

How many fluid ounces are equivalent to $76$ quarts? $(8 \text{ fluid ounces} = 1 \text{ cup and } 4 \text{ cups} = 1 \text{ quart})$

# Question ID b6843bc7

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

**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? $(1 \text{ mile} = 1{,}760 \text{ yards})$

# Question ID 664315f9

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

**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 |
|---|---|---|---|---|
| SAT | Math | Problem-Solving and Data Analysis | Ratios, rates, proportional relationships, and units | Medium |

ID: 58f4cf97

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

A. $\frac{1}{20}$

B. $\frac{9}{20}$

C. $6$

D. $20$

# Question ID e9fe7acd

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

**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? $(1 \text{ mile} = 1{,}760 \text{ yards})$

# Question ID bf75726f

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

**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 |
|---|---|---|---|---|
| SAT | Math | Problem-Solving and Data Analysis | Ratios, rates, proportional relationships, and units | Medium |

**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 |
|---|---|---|---|---|
| SAT | Math | Problem-Solving and Data Analysis | Ratios, rates, proportional relationships, and units | Medium |

**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 |
|---|---|---|---|---|
| SAT | Math | Problem-Solving and Data Analysis | Ratios, rates, proportional relationships, and units | Medium |

**ID: 213aaab1**

A distance of $61$ furlongs is equivalent to how many feet? $(1\ \text{furlong} = 220\ \text{yards and}\ 1\ \text{yard} = 3\ \text{feet})$

# Question ID 3e19942b

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

ID: 3e19942b

A distance of $112$ furlongs is equivalent to how many feet? $(1\ \text{furlong} = 220\ \text{yards and}\ 1\ \text{yard} = 3\ \text{feet})$

# Question ID f9c3e6a3

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

**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 |
|---|---|---|---|---|
| SAT | Math | Problem-Solving and Data Analysis | Ratios, rates, proportional relationships, and units | Medium |

**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 |
|---|---|---|---|---|
| SAT | Math | Problem-Solving and Data Analysis | Ratios, rates, proportional relationships, and units | Medium |

ID: 128d0947

How many tablespoons are equivalent to $14$ teaspoons? $(3 \text{ teaspoons} = 1 \text{ tablespoon})$

# Question ID ce901565

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

**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 |
|---|---|---|---|---|
| SAT | Math | Problem-Solving and Data Analysis | Ratios, rates, proportional relationships, and units | Medium |

**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.