Question ID 3f5398a6

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

ID: 3f5398a6

1.1

For a person *m* miles from a flash of lightning, the length of the time interval from the moment the person sees the lightning to the moment the person hears the thunder is *k* seconds. The ratio of *m* to *k* can be estimated to be 1 to 5. According to this estimate, the person is how many miles from a flash of lightning if the time interval is 25 seconds?

A. 10

B. 9

C. 6

D. 5

Question ID 000259aa

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

ID: 000259aa

1.2

A group of monarch butterflies migrated from Chicago, Illinois, to Michoacán, Mexico, flying a total of 2,100 miles. It took a single butterfly in the group 120 days to travel this route one way. On average, how many miles did the butterfly travel per day?

A. 0.057

B. 0.729

C. 17.5

D. 24

Question ID 312ba47c

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

ID: 312ba47c

1.3

In a box of pens, the ratio of black pens to red pens is 8 to 1. There are 40 black pens in the box. How many red pens are in the box?

A. 5

B. 8

C. 40

D. 320

Question ID 15617f62

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

ID: 15617f62

1.4

The population density of Worthington is 290 people per square mile. Worthington has a population of $92{,}800$ people. What is the area, in square miles, of Worthington?

A. $102{,}400$

B. $93{,}090$

C. 320

D. 32

Question ID be35c117

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

ID: be35c117

1.5

A wind turbine completes 900 revolutions in 50 minutes. At this rate, how many revolutions per minute does this turbine complete?

A. 18

B. 850

C. 950

D. $1{,}400$

Question ID 3f236a64

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

ID: 3f236a64

1.6

x	y
1	4
3	12
5	20
40	k

In the table above, the ratio of y to x for each ordered pair is constant. What is the value of k ?

A. 28

B. 36

C. 80

D. 160

Question ID 6310adbc

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

ID: 6310adbc

1.7

The ratio of t to u is 1 to 2, and $t = 10$.

What is the value of u ?

A. 2

B. 5

C. 10

D. 20

Question ID aeeaec96

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

ID: aeeaec96

1.8

How many yards are equivalent to 612 inches? $(1\ \text{yard} = 36\ \text{inches})$

A. 0.059

B. 17

C. 576

D. $22{,}032$

Question ID e9841407

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

ID: e9841407

1.9

Shaquan has 7 red cards and 28 blue cards. What is the ratio of red cards to blue cards that Shaquan has?

A. 1 to 4

B. 4 to 1

C. 1 to 7

D. 7 to 1

Question ID ba62b0b0

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

ID: ba62b0b0

1.10

A kangaroo has a mass of 28 kilograms. What is the kangaroo's mass, in grams? $(1\ \text{kilogram} = 1{,}000\ \text{grams})$

A. $28{,}000$

B. $1{,}028$

C. 972

D. 784

Question ID 24ad9dcb

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

ID: 24ad9dcb

1.11

The weight of an object on Venus is approximately $\frac{9}{10}$ of its weight on Earth. The weight of an object on Jupiter is approximately $\frac{23}{10}$ of its weight on Earth. If an object weighs 100 pounds on Earth, approximately how many more pounds does it weigh on Jupiter than it weighs on Venus?

A. 90

B. 111

C. 140

D. 230

Question ID d0d9ede4

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

ID: d0d9ede4

1.12

How many feet are equivalent to 34 yards? $(1\ \text{yard} = 3\ \text{feet})$

Question ID 06a152cd

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

ID: 06a152cd

1.13

To make a bakery's signature chocolate muffins, a baker needs 2.5 ounces of chocolate for each muffin. How many pounds of chocolate are needed to make 48 signature chocolate muffins? (1 pound = 16 ounces)

A. 7.5

B. 10

C. 50.5

D. 120

Question ID 3ac09984

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

ID: 3ac09984

1.14

Marta has 7,500 pesos she will convert to US dollars using a currency exchange service. At this time, the currency exchange rate is 1 peso = 0.075 US dollars. The exchange service will charge Marta a 2% fee on the converted US dollar amount. How many US dollars will Marta receive from the currency exchange after the 2% fee is applied?

A. $551
.25

B. $562
.50

C. $5,625
.00

D. $98,000
.00

Question ID 99550621

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

ID: 99550621

1.15

Makayla is planning an event in a 5,400-square-foot room. If there should be at least 8 square feet per person, what is the maximum number of people that could attend this event?

A. 588

B. 675

C. 15,274

D. 43,200

Question ID 808f7d6c

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

ID: 808f7d6c

1.16

If $t = 4u$, which of the following is equivalent to $2t$?

A. $8u$

B. $2u$

C. u

D. $\frac{1}{2}u$

Question ID 4347a032

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

ID: 4347a032

1.17

How many teaspoons are equivalent to 44 tablespoons? $(3\ \text{teaspoons} = 1\ \text{tablespoon})$

A. 47

B. 88

C. 132

D. 176

Question ID d7a3179d

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

ID: d7a3179d

1.18

How many yards are equivalent to $1{,}116$ inches? $(1\ \text{yard} = 36\ \text{inches})$

Question ID 3318d37b

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

ID: 3318d37b

1.19

A product costs 11.00 dollars per pound. What is the cost, in dollars, for 6 pounds of the product?

Question ID 4837406c

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

ID: 4837406c

1.20

An object travels at a constant speed of 6 centimeters per second. At this speed, what is the time, in seconds, that it would take for the object to travel 24 centimeters?

Question ID 94660ba8

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

ID: 94660ba8

1.21

A participant in a bicycle race completes the race with an average speed of $24{,}816$ yards per hour. What is this average speed, in miles per hour? $(1\ \text{mile} = 1{,}760\ \text{yards})$

Question ID da9ffcf6

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

ID: da9ffcf6

1.22

The ratio of the length of line segment XY to the length of line segment ZV is 6 to 1. If the length of line segment XY is 102 inches, what is the length, in inches, of line segment ZV?

A. 17

B. 96

C. 102

D. 612