# Question ID bbfa4707

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

**ID: bbfa4707**

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. $1{,}400$

**ID: bbfa4707 Answer**

Correct Answer: A

Rationale

Choice A is correct. Dividing the number of revolutions by the number of minutes gives the number of revolutions the turbine completes per minute. It's given that the wind turbine completes $900$ revolutions in $50$ minutes. Therefore, at this rate, this turbine completes $\frac{900}{50}$, or $18$, revolutions per minute.

Choice B is incorrect and may result from conceptual or calculation errors.

Choice C is incorrect and may result from conceptual or calculation errors.

Choice D is incorrect and may result from conceptual or calculation errors.

Question Difficulty: Easy

# Question ID 5216125e

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

**ID: 5216125e**

A customer spent $27 to purchase oranges at $3 per pound. How many pounds of oranges did the customer purchase?

**ID: 5216125e Answer**

Correct Answer: 9

Rationale

The correct answer is 9. It's given that the customer spent $\$\ 27$ to purchase oranges at $\$\ 3$ per pound. Therefore, the number of pounds of oranges the customer purchased is $\$\ 27\frac{1\ \text{pound}}{\$\ 3}$, or 9 pounds.

Question Difficulty: Easy

# Question ID e25aee5f

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

**ID: e25aee5f**

A mechanical device in a workshop produces items at a constant rate of $60$ items per hour. At this rate, how many items will the mechanical device produce in $3$ hours?

**ID: e25aee5f Answer**

Correct Answer: 180

Rationale

The correct answer is $180$. It's given that a mechanical device produces items at a constant rate of $60$ items per hour. This rate can be written as $\frac{60 \text{ items}}{1 \text{ hour}}$. Let $x$ represent the number of items the mechanical device will produce in $3$ hours at the given rate. It follows that $\frac{60 \text{ items}}{1 \text{ hour}} = \frac{x \text{ items}}{3 \text{ hours}}$, which can be written as $\frac{60}{1} = \frac{x}{3}$, or $60 = \frac{x}{3}$. Multiplying each side of this equation by $3$ yields $180 = x$. Therefore, at the given rate, the mechanical device will produce $180$ items in $3$ hours.

Alternate approach: It's given that a mechanical device produces items at a constant rate of $60$ items per hour. At this rate, the mechanical device will produce $\frac{60 \text{ items}}{1 \text{ hour}} 3 \text{ hours}$, or $180$ items in $3$ hours.

Question Difficulty: Easy

# Question ID 3fb7ca66

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

**ID: 3fb7ca66**

A giant armadillo has a mass of $39$ kilograms. What is the giant armadillo's mass in **grams**?
$(1 \text{ kilogram} = 1{,}000 \text{ grams})$

**ID: 3fb7ca66 Answer**

Correct Answer: 39000

Rationale

The correct answer is $39{,}000$. It's given that the giant armadillo has a mass of $39$ kilograms. Since $1$ kilogram is equal to $1{,}000$ grams, $39$ kilograms is equal to $39 \text{ kilograms} \ \frac{1{,}000 \text{ grams}}{1 \text{ kilogram}}$, or $39{,}000$ grams. Therefore, the giant armadillo's mass, in grams, is $39{,}000$.

Question Difficulty: Easy

# Question ID 25f9c72c

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

**ID: 25f9c72c**

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. $784$

**ID: 25f9c72c Answer**

Correct Answer: A

Rationale

Choice A is correct. It's given that a kangaroo has a mass of $28$ kilograms and that $1$ kilogram is equal to $1{,}000$ grams. Therefore, the kangaroo's mass, in grams, is $28 \text{ kilograms} \frac{1{,}000 \text{ grams}}{1 \text{ kilogram}}$, which is equivalent to $28{,}000$ grams.

Choice B is incorrect and may result from conceptual or calculation errors.

Choice C is incorrect and may result from conceptual or calculation errors.

Choice D is incorrect and may result from conceptual or calculation errors.

Question Difficulty: Easy

# Question ID 95333d9b

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

**ID: 95333d9b**

A fish swam a distance of $5{,}104$ yards. How far did the fish swim, in miles? $(1 \text{ mile} = 1{,}760 \text{ yards})$

A. $0.3$

B. $2.9$

C. $3{,}344$

D. $6{,}864$

**ID: 95333d9b Answer**

Correct Answer: B

Rationale

Choice B is correct. It's given that the fish swam $5{,}104$ yards and that $1$ mile is equal to $1{,}760$ yards. Therefore, the fish swam $5{,}104 \text{ yards} \frac{1 \text{ mile}}{1{,}760 \text{ yards}}$, which is equivalent to $\frac{5{,}104}{1{,}760}$ miles, or $2.9$ miles.

Choice A is incorrect and may result from conceptual or calculation errors.

Choice C is incorrect and may result from conceptual or calculation errors.

Choice D is incorrect and may result from conceptual or calculation errors.

Question Difficulty: Easy

# Question ID fff446be

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

**ID: fff446be**

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

**ID: fff446be Answer**

Correct Answer: 14.1

Rationale

The correct answer is $14.1$. It's given that a participant completes the bicycle race with an average speed of $24{,}816$ yards per hour and $1 \text{ mile} = 1{,}760 \text{ yards}$. It follows that this average speed is equivalent to $\frac{24{,}816 \text{ yards}}{1 \text{ hour}} \frac{1 \text{ mile}}{1{,}760 \text{ yards}}$, which yields $\frac{14.1 \text{ miles}}{1 \text{ hour}}$, or $14.1$ miles per hour.

Question Difficulty: Easy

# Question ID cd1afde7

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

## ID: cd1afde7

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. $320$

## ID: cd1afde7 Answer

Correct Answer: A

Rationale

Choice A is correct. It's given that the ratio of black pens to red pens is $8$ to $1$. Therefore, there are $\frac{1}{8}$ as many red pens as black pens in the box. It's also given that there are $40$ black pens in the box. Therefore, the number of red pens is $\frac{1}{8}$ of the $40$ black pens. Thus, the number of red pens is $40\frac{1}{8}$, or $5$.

Choice B is incorrect. This is the number of black pens in the box for every red pen.

Choice C is incorrect. This is the number of black pens in the box.

Choice D is incorrect. This is the number of red pens in the box if the ratio of black pens to red pens is $1$ to $8$.

Question Difficulty: Easy

# Question ID 6aa7e316

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

## ID: 6aa7e316

A certain bird species can fly at an average speed of $16$ meters per second when in continuous flight. At this rate, how many meters would this bird species fly in $4$ seconds?

A. $64$

B. $20$

C. $16$

D. $12$

## ID: 6aa7e316 Answer

Correct Answer: A

Rationale

Choice A is correct. It's given that a certain bird species can fly at an average speed of $16$ meters per second when in continuous flight. At this rate, in $4$ seconds this bird species would fly $\frac{16 \text{ meters}}{\text{second}} 4 \text{ seconds}$, or $64$ meters.

Choice B is incorrect. This is the value of $16 + 4$, not $164$.

Choice C is incorrect. This is the distance the bird would fly in $1$ second, not $4$ seconds.

Choice D is incorrect. This is the value of $16$ - $4$, not $164$.

Question Difficulty: Easy

# Question ID 001a48b4

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

**ID: 001a48b4**

The number of raccoons in a $131$-square-mile area is estimated to be $2{,}358$. What is the estimated population density, in raccoons per square mile, of this area?

A. $18$

B. $131$

C. $149$

D. $2{,}376$

**ID: 001a48b4 Answer**

Correct Answer: A

Rationale

Choice A is correct. It's given that there are $2{,}358$ raccoons in a $131$-square-mile area. The estimated population density, in raccoons per square mile, is the estimated number of raccoons divided by the number of square miles. Therefore, the estimated population density of this area is $\frac{2{,}358 \text{ raccoons}}{131 \text{ square miles}}$, or $18$ raccoons per square mile.

Choice B is incorrect. This is the number of square miles in the area, not the estimated number of raccoons per square mile in this area.

Choice C is incorrect and may result from conceptual or calculation errors.

Choice D is incorrect and may result from conceptual or calculation errors.

Question Difficulty: Easy

# Question ID 87bb206b

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

**ID: 87bb206b**

How many yards are equivalent to $77$ rods? $(5.5 \text{ yards} = 1 \text{ rod})$

**ID: 87bb206b Answer**

Correct Answer: 423.5, 847/2

Rationale

The correct answer is $423.5$. It's given that $5.5 \quad \text{yards} = 1 \quad \text{rod}$. Therefore, $77$ rods is equivalent to $77 \quad \text{rods} \frac{5.5 \quad \text{yards}}{1 \quad \text{rod}}$, or $423.5$ yards. Note that 423.5 and 847/2 are examples of ways to enter a correct answer.

Question Difficulty: Easy

# Question ID 03d02396

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

## ID: 03d02396

A cherry pitting machine pits $12$ pounds of cherries in $3$ minutes. At this rate, how many minutes does it take the machine to pit $96$ pounds of cherries?

A. $8$

B. $15$

C. $24$

D. $36$

## ID: 03d02396 Answer

Correct Answer: C

Rationale

Choice C is correct. It's given that the cherry pitting machine pits $12$ pounds of cherries in $3$ minutes. This rate can be written as $\frac{12 \text{ pounds of cherries}}{3 \text{ minutes}}$. If the number of minutes it takes the machine to pit $96$ pounds of cherries is represented by $x$, the value of $x$ can be calculated by solving the equation $\frac{12 \text{ pounds of cherries}}{3 \text{ minutes}} = \frac{96 \text{ pounds of cherries}}{x \text{ minutes}}$, which can be rewritten as $\frac{12}{3} = \frac{96}{x}$, or $4 = \frac{96}{x}$. Multiplying each side of this equation by $x$ yields $4x = 96$. Dividing each side of this equation by $4$ yields $x = 24$. Therefore, it takes the machine $24$ minutes to pit $96$ pounds of cherries.

Choice A is incorrect. This is the number of minutes it takes the machine to pit $32$, not $96$, pounds of cherries.

Choice B is incorrect. This is the number of minutes it takes the machine to pit $60$, not $96$, pounds of cherries.

Choice D is incorrect. This is the number of minutes it takes the machine to pit $144$, not $96$, pounds of cherries.

Question Difficulty: Easy

# Question ID 0d810cbe

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

**ID: 0d810cbe**

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

A. $0.059$

B. $17$

C. $576$

D. $22{,}032$

**ID: 0d810cbe Answer**

Correct Answer: B

Rationale

Choice B is correct. It's given that $1 \text{ yard} = 36 \text{ inches}$. Therefore, $612$ inches is equivalent to $612 \text{ inches} \frac{1 \text{ yard}}{36 \text{ inches}}$, which can be rewritten as $\frac{612 \text{ yards}}{36}$, or $17$ yards.

Choice A is incorrect. This is the number of yards that are equivalent to $2.124$ inches.

Choice C is incorrect. This is the number of yards that are equivalent to $20{,}736$ inches.

Choice D is incorrect. This is the number of yards that are equivalent to $793{,}152$ inches.

Question Difficulty: Easy

# Question ID b156d1ac

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

## ID: b156d1ac

An object's speed is $64$ yards per second. What is the object's speed, in feet per second? $(1 \text{ yard} = 3 \text{ feet})$

A. $61$

B. $67$

C. $94$

D. $192$

## ID: b156d1ac Answer

Correct Answer: D

Rationale

Choice D is correct. Since $1$ yard is equal to $3$ feet, $64$ yards is equal to $64 \text{ yards} \frac{3 \text{ feet}}{1 \text{ yard}}$, or $192$ feet. It follows that $64$ yards per second is equivalent to $192$ feet per second. Therefore, the object's speed is $192$ feet per second.

Choice A is incorrect. A speed of $61$ feet per second is equivalent to $\frac{61}{3}$, not $64$, yards per second.

Choice B is incorrect. A speed of $67$ feet per second is equivalent to $\frac{67}{3}$, not $64$, yards per second.

Choice C is incorrect. A speed of $94$ feet per second is equivalent to $\frac{94}{3}$, not $64$, yards per second.

Question Difficulty: Easy

# Question ID 7f6c266c

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

## ID: 7f6c266c

The ratio $x$ to $y$ is equivalent to the ratio $12$ to $t$. When $x = 156$, what is the value of $y$ in terms of $t$?

A. $13t$

B. $12t$

C. $144t$

D. $168t$

## ID: 7f6c266c Answer

Correct Answer: A

Rationale

Choice A is correct. It's given that the ratio $x$ to $y$ is equivalent to the ratio $12$ to $t$. This can be represented by $\frac{x}{y} = \frac{12}{t}$. Substituting $156$ for $x$ in this equation yields $\frac{156}{y} = \frac{12}{t}$. This can be rewritten as $12y = 156t$. Dividing both sides of this equation by $12$ yields $y = 13t$. Therefore, when $x = 156$, the value of $y$ in terms of $t$ is $13t$.

Choice B is incorrect and may result from conceptual or calculation errors.

Choice C is incorrect and may result from conceptual or calculation errors.

Choice D is incorrect and may result from conceptual or calculation errors.

Question Difficulty: Easy

# Question ID 28c1d699

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

**ID: 28c1d699**

A printer produces posters at a constant rate of $42$ posters per minute. At what rate, in posters per hour, does the printer produce the posters?

**ID: 28c1d699 Answer**

Correct Answer: 2520

Rationale

The correct answer is $2{,}520$. There are $60$ minutes in one hour. At a rate of $42$ posters per minute, the number of posters produced in one hour can be determined by $\frac{42 \text{ posters}}{1 \text{ minute}} \frac{60 \text{ minutes}}{1 \text{ hour}}$, which is $2{,}520$ posters per hour.

Question Difficulty: Easy

# Question ID 433a6af1

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

**ID: 433a6af1**

A special camera is used for underwater ocean research. When the camera is at a depth of $58$ fathoms, what is the camera's depth in feet? $(1 \text{ fathom} = 6 \text{ feet})$

**ID: 433a6af1 Answer**

Correct Answer: 348

Rationale

The correct answer is $348$. It's given that $1$ fathom is equivalent to $6$ feet. Therefore, $58$ fathoms is equivalent to $58 \text{ fathoms} \frac{6 \text{ feet}}{1 \text{ fathom}}$, or $348$ feet. Thus, when the camera is at a depth of $58$ fathoms, the camera's depth, in feet, is $348$.

Question Difficulty: Easy

# Question ID dc150731

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

**ID: dc150731**

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

**ID: dc150731 Answer**

Correct Answer: 102

Rationale

The correct answer is $102$. It's given that $1$ yard is equivalent to $3$ feet. Therefore, $34$ yards is equivalent to $34 \text{ yards} \frac{3 \text{ feet}}{1 \text{ yard}}$, or $102$ feet.

Question Difficulty: Easy

# Question ID de1add26

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

**ID: de1add26**

How many meters are equivalent to $2{,}300$ centimeters? $(100 \text{ centimeters} = 1 \text{ meter})$

A. $0.043$

B. $23$

C. $2{,}400$

D. $230{,}000$

**ID: de1add26 Answer**

Correct Answer: B

Rationale

Choice B is correct. It's given that $100$ centimeters is equal to $1$ meter. Therefore, $2{,}300$ centimeters is equivalent to $2{,}300 \quad \text{centimeters} \frac{1 \quad \text{meter}}{100 \quad \text{centimeters}}$, or $23$ meters.

Choice A is incorrect. $0.043$ meters is equivalent to $4.3$, not $2{,}300$, centimeters.

Choice C is incorrect. $2{,}400$ meters is equivalent to $240{,}000$, not $2{,}300$, centimeters.

Choice D is incorrect. $230{,}000$ meters is equivalent to $23{,}000{,}000$, not $2{,}300$, centimeters.

Question Difficulty: Easy

# Question ID 162af826

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

**ID: 162af826**

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

**ID: 162af826 Answer**

Correct Answer: 66

Rationale

The correct answer is $66$. It's given that a product costs $11.00$ dollars per pound. Therefore, the cost for $6$ pounds of the product is $\frac{11.00 \text{ dollars}}{1 \text{ pound}} 6 \text{ pounds}$, which is equivalent to $66.00$, or $66$, dollars.

Question Difficulty: Easy

# Question ID a26ec64e

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

**ID: a26ec64e**

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. $612$

**ID: a26ec64e Answer**

Correct Answer: A

Rationale

Choice A is correct. It's given that the ratio of the length of line segment $XY$ to the length of line segment $ZV$ is $6$ to $1$, which means $\frac{XY}{ZV} = \frac{6}{1}$. It's given that the length of line segment $XY$ is $102$ inches. If the length, in inches, of line segment $ZV$ is represented by $l$, the value of $l$ can be calculated by solving the equation $\frac{102}{l} = \frac{6}{1}$, or $\frac{102}{l} = 6$. Multiplying each side of this equation by $l$ yields $102 = 6l$. Dividing each side of this equation by $6$ yields $17 = l$. Therefore, the length of line segment $ZV$ is $17$ inches.

Choice B is incorrect. This is the length, in inches, of line segment $ZV$ if the length of line segment $XY$ is $576$, not $102$, inches.

Choice C is incorrect. This is the length, in inches, of line segment $XY$, not line segment $ZV$.

Choice D is incorrect. This is the length, in inches, of line segment $ZV$ if the ratio of the length of line segment $XY$ to the length of line segment $ZV$ is $1$ to $6$, not $6$ to $1$.

Question Difficulty: Easy

# Question ID 7203f371

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

**ID: 7203f371**

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?

**ID: 7203f371 Answer**

Correct Answer: 4

Rationale

The correct answer is $4$. It's given that the object travels at a constant speed of $6$ centimeters per second. The speed of the object can be written as $\frac{6 \text{ centimeters}}{1 \text{ second}}$. Let $x$ represent the time, in seconds, it would take for the object to travel $24$ centimeters. The value of $x$ can be calculated by solving the equation $\frac{6 \text{ centimeters}}{1 \text{ second}} = \frac{24 \text{ centimeters}}{x \text{ seconds}}$, which can be written as $\frac{6}{1} = \frac{24}{x}$, or $6 = \frac{24}{x}$. Multiplying each side of this equation by $x$ yields $6x = 24$. Dividing each side of this equation by $6$ yields $x = 4$. Therefore, it would take the object $4$ seconds to travel $24$ centimeters.

Question Difficulty: Easy

# Question ID 734722b0

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

**ID: 734722b0**

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. $32$

**ID: 734722b0 Answer**

Correct Answer: C

Rationale

Choice C is correct. It's given that the population density of Worthington is $290$ people per square mile and Worthington has a population of $92{,}800$ people. Therefore, the area of Worthington is $92{,}800 \text{ people} \frac{1 \text{ square mile}}{290 \text{ people}}$, which is equivalent to $\frac{92{,}800 \text{ square miles}}{290}$, or $320$ square miles.

Choice A is incorrect and may result from conceptual or calculation errors.

Choice B is incorrect and may result from conceptual or calculation errors.

Choice D is incorrect and may result from conceptual or calculation errors.

Question Difficulty: Easy

# Question ID 4eaaf644

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

**ID: 4eaaf644**

A special camera is used for underwater ocean research. The camera is at a depth of $39$ fathoms. What is the camera's depth in feet? $(1 \text{ fathom} = 6 \text{ feet})$

A. $234$

B. $117$

C. $45$

D. $7$

**ID: 4eaaf644 Answer**

Correct Answer: A

Rationale

Choice A is correct. It's given that a special camera is used for underwater ocean research, and this camera is at a depth of $39$ fathoms. It's also given that $1$ fathom is equal to $6$ feet. Thus, $39$ fathoms is equivalent to $39 \text{ fathoms} \frac{6 \text{ feet}}{1 \text{ fathom}}$, or $234$ feet. Therefore, the camera's depth, in feet, is $234$.

Choice B is incorrect. This is the camera's depth, in feet, if the camera is at a depth of $19.5$ fathoms.

Choice C is incorrect. This is the camera's depth, in feet, if the camera is at a depth of $7.5$ fathoms.

Choice D is incorrect and may result from conceptual or calculation errors.

Question Difficulty: Easy

# Question ID 1f67ae69

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

## ID: 1f67ae69

An object travels at a constant speed of $12$ centimeters per second. At this speed, what is the time, in seconds, that it would take for the object to travel $108$ centimeters?

A. $9$

B. $96$

C. $120$

D. $972$

## ID: 1f67ae69 Answer

Correct Answer: A

Rationale

Choice A is correct. If the object travels $108$ centimeters at a speed of $12$ centimeters per second, the time of travel can be determined by dividing the total distance by the speed. This results in $\frac{108 \text{ centimeters}}{12 \text{ centimeters / second}}$, which is $9$ seconds.

Choice B is incorrect and may result from conceptual or calculation errors.

Choice C is incorrect and may result from conceptual or calculation errors.

Choice D is incorrect and may result from conceptual or calculation errors.

Question Difficulty: Easy

# Question ID 4168b08f

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

**ID: 4168b08f**

Tilly earns $p$ dollars for every $w$ hours of work. Which expression represents the amount of money, in dollars, Tilly earns for $39w$ hours of work?

A. $39p$

B. $\frac{p}{39}$

C. $p + 39$

D. $p - 39$

**ID: 4168b08f Answer**

Correct Answer: A

Rationale

Choice A is correct. It's given that Tilly earns $p$ dollars for every $w$ hours of work. This can be represented by the proportion $\frac{p}{w}$. The amount of money, $x$, Tilly earns for $39w$ hours of work can be found by setting up the proportion $\frac{p}{w} = \frac{x}{39w}$. This can be rewritten as $39pw = xw$. Dividing both sides by $w$ results in $x = 39p$.

Choice B is incorrect. This is the amount of money Tilly earns in dollars per hour, not the amount of money Tilly earns for $39w$ hours of work.

Choice C is incorrect. This is the amount of money Tilly earns for $w$ hours of work plus $39$, not the amount of money Tilly earns for $39w$ hours of work.

Choice D is incorrect. This is the amount of money Tilly earns for $w$ hours of work minus $39$, not the amount of money Tilly earns for $39w$ hours of work.

Question Difficulty: Easy

# Question ID d9896b5b

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

## ID: d9896b5b

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

A. $47$

B. $88$

C. $132$

D. $176$

## ID: d9896b5b Answer

Correct Answer: C

Rationale

Choice C is correct. It's given that $3$ teaspoons is equivalent to $1$ tablespoon. Therefore, $44$ tablespoons is equivalent to $44 \text{ tablespoons} \frac{3 \text{ teaspoons}}{1 \text{ tablespoon}}$, or $132$ teaspoons.

Choice A is incorrect. This is equivalent to approximately $15.66$ tablespoons, not $44$ tablespoons.

Choice B is incorrect. This is equivalent to approximately $29.33$ tablespoons, not $44$ tablespoons.

Choice D is incorrect. This is equivalent to approximately $58.66$ tablespoons, not $44$ tablespoons.

Question Difficulty: Easy

# Question ID a7de288f

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

**ID: a7de288f**

What length, in centimeters, is equivalent to a length of $51$ meters? $(1 \text{ meter} = 100 \text{ centimeters})$

A. $0.051$

B. $0.51$

C. $5{,}100$

D. $51{,}000$

**ID: a7de288f Answer**

Correct Answer: C

Rationale

Choice C is correct. Since $1$ meter is equal to $100$ centimeters, $51$ meters is equal to $51 \text{ meters} \frac{100 \text{ centimeters}}{1 \text{ meter}}$, or $5{,}100$ centimeters.

Choice A is incorrect and may result from conceptual or calculation errors.

Choice B is incorrect and may result from dividing, rather than multiplying, $51$ by $100$.

Choice D is incorrect. This is the length, in millimeters rather than centimeters, that is equivalent to a length of $51$ meters.

Question Difficulty: Easy

# Question ID 353d7e3a

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

**ID: 353d7e3a**

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

**ID: 353d7e3a Answer**

Correct Answer: 31

Rationale

The correct answer is $31$. It's given that $1$ yard is equal to $36$ inches. Therefore, $1{,}116$ inches is equivalent to $1{,}116 \text{ inches} \frac{1 \text{ yard}}{36 \text{ inches}}$, or $31$ yards.

Question Difficulty: Easy