Question ID 2e491241

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Percentages	Easy

ID: 2e491241

There are 250 trees in a park. Of these trees, 6% are birch trees. How many birch trees are in the park?

A. 6

B. 15

C. 75

D. 244

ID: 2e491241 Answer

Correct Answer: B

Rationale

Choice B is correct. It's given that there are 250 trees in a park and of these trees, 6% are birch trees. The number of birch trees in the park can be calculated by multiplying the number of trees in the park by $\frac{6}{100}$. Therefore, the number of birch trees in the park is $250\left(\frac{6}{100}\right)$, or 15.

Choice A is incorrect. This is the percentage of trees in the park that are birch trees, not the number of birch trees in the park.

Choice C is incorrect. This is 30%, not 6%, of 250.

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

Question Difficulty: Easy

Question ID bd287a21

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Percentages	Easy

ID: bd287a21

What percentage of 300 is 75?

A. 25%

B. 50%

C. 75%

D. 225%

ID: bd287a21 Answer

Correct Answer: A

Rationale

Choice A is correct. Let x represent the percentage of 300 that is 75. This can be written as $\frac{x}{100}(300) = 75$, or $3x = 75$. Dividing both sides of this equation by 3 yields $x = 25$. Therefore, 25% of 300 is 75.

Choice B is incorrect. 50% of 300 is 150, not 75.

Choice C is incorrect. 75% of 300 is 225, not 75.

Choice D is incorrect. 225% of 300 is 675, not 75.

Question Difficulty: Easy

Question ID 309344bd

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Percentages	Easy

ID: 309344bd

Last year, 200 students enrolled in an interior design program. This year, the number of students enrolled is 147% of last year's number. How many students are enrolled in the interior design program this year?

A. 247

B. 294

C. 347

D. 394

ID: 309344bd Answer

Correct Answer: B

Rationale

Choice B is correct. It's given that the number of students enrolled in an interior design program this year is 147% of last year's number, which is 200. 147% of 200 can be expressed as $\left(\frac{147}{100}\right)(200)$, or $(1.47)(200)$, which is equivalent to 294. Therefore, 294 students are enrolled in the interior design program this year.

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 f664bd69

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Percentages	Easy

ID: f664bd69

There are 170 blocks in a container. Of these blocks, 10% are green. How many blocks in the container are green?

ID: f664bd69 Answer

Correct Answer: 17

Rationale

The correct answer is 17. It's given that there are 170 blocks in a container, and of these blocks, 10% are green. Since 10% can be rewritten as $\frac{10}{100}$, or 0.1, the number of green blocks in the container is $0.1(170)$, or 17.

Question Difficulty: Easy

Question ID 4f6f2989

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Percentages	Easy

ID: 4f6f2989

What is 10% of 370?

A. 27

B. 37

C. 333

D. 360

ID: 4f6f2989 Answer

Correct Answer: B

Rationale

Choice B is correct. 10% of a quantity means $\frac{10}{100}$ times the quantity. Therefore, 10% of 370 can be represented as $\frac{10}{100}(370)$, which is equivalent to $0.10(370)$, or 37. Therefore, 10% of 370 is 37.

Choice A is incorrect. This is 10% of 270, not 10% of 370.

Choice C is incorrect. This is 90% of 370, not 10% of 370.

Choice D is incorrect. This is $370 - 10$, not 10% of 370.

Question Difficulty: Easy

Question ID 5bfefc23

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Percentages	Easy

ID: 5bfefc23

Of $900{,}000$ beads, $828{,}000$ are silver. What percentage of the beads are silver?

A. 8%

B. 36%

C. 72%

D. 92%

ID: 5bfefc23 Answer

Correct Answer: D

Rationale

Choice D is correct. The proportion of the beads that are silver can be written as $\frac{828{,}000}{900{,}000}$, or 0.92. Therefore, the percentage of the beads that are silver is $0.92(100)$, or 92%.

Choice A is incorrect. This is the percentage of the beads that are not silver.

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

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

Question Difficulty: Easy

Question ID 742193f4

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Percentages	Easy

ID: 742193f4

There are 320 marbles in a container. Of these marbles, 10% are red. How many marbles in the container are red?

A. 32

B. 288

C. 320

D. 352

ID: 742193f4 Answer

Correct Answer: A

Rationale

Choice A is correct. It's given that 10% of the 320 marbles in a container are red. Therefore, the number of red marbles can be calculated by multiplying the number of marbles in the container by $\frac{10}{100}$, which gives $320\left(\frac{10}{100}\right)$, or 32.

Choice B is incorrect. This is the number of marbles in the container that aren't red.

Choice C is incorrect. This is the total number of marbles in the container.

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

Question Difficulty: Easy

Question ID 652b6d2b

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Percentages	Easy

ID: 652 ID: 652b6d2b Answer

Correct Answer: B

What is 20% of 440?

Rationale

A. 44

Choice B is correct. 20% of 440 can be calculated as $\left(\frac{20}{100}\right)(440)$, which is equivalent to $\frac{8,800}{100}$, or 88.

B. 88

Choice A is incorrect. This is 10%, not 20%, of 440.

C. 880

Choice C is incorrect. This is 200%, not 20%, of 440.

D. $1,760$

Choice D is incorrect. This is 400%, not 20%, of 440.

Question Difficulty: Easy

Question ID 73c68513

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Percentages	Easy

ID: 73c **ID: 73c68513 Answer**

Correct Answer: A

What is 23% of 100?

Rationale

A. 23

Choice A is correct. 23% of 100 can be calculated by multiplying $\frac{23}{100}$ by 100, which yields $\left(\frac{23}{100}\right)100$, or 23.

B. 46

Choice B is incorrect. This is 46%, not 23%, of 100.

C. 77

Choice C is incorrect. This is 23% less than 100, not 23% of 100.

D. 123

Choice D is incorrect. This is 23% greater than 100, not 23% of 100.

Question Difficulty: Easy

Question ID 83836cb2

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Percentages	Easy

ID: 83836cb2

What is 10% of 470?

A. 37

B. 47

C. 423

D. 460

ID: 83836cb2 Answer

Correct Answer: B

Rationale

Choice B is correct. 10% of a quantity means $\frac{10}{100}$ times the quantity. Therefore, 10% of 470 can be represented as $\frac{10}{100}(470)$, which is equivalent to $0.10(470)$, or 47. Therefore, 10% of 470 is 47.

Choice A is incorrect. This is 10% of 370, not 10% of 470.

Choice C is incorrect. This is 90% of 470, not 10% of 470.

Choice D is incorrect. This is $470 - 10$, not 10% of 470.

Question Difficulty: Easy

Question ID af24ba65

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Percentages	Easy

ID: af24ba65

Of $300{,}000$ paper clips, $234{,}000$ are size large. What percentage of the paper clips are size large?

A. 22%

B. 33%

C. 66%

D. 78%

ID: af24ba65 Answer

Correct Answer: D

Rationale

Choice D is correct. The proportion of the paper clips that are size large can be written as $\frac{234{,}000}{300{,}000}$, or 0.78. Therefore, the percentage of the paper clips that are size large is $0.78(100)$, or 78%.

Choice A is incorrect. This is the percentage of the paper clips that are not size large.

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

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

Question Difficulty: Easy

Question ID 045ed5be

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Percentages	Easy

ID: 045ed5be

Isabel grows potatoes in her garden. This year, she harvested 760 potatoes and saved 10% of them to plant next year. How many of the harvested potatoes did Isabel save to plant next year?

A. 66

B. 76

C. 84

D. 86

ID: 045ed5be Answer

Correct Answer: B

Rationale

Choice B is correct. The number of harvested potatoes Isabel saved to plant next year can be calculated by multiplying the total number of potatoes Isabel harvested, 760, by the proportion of potatoes she saved. Since she saved 10% of the potatoes she harvested, the proportion of potatoes she saved is $\frac{10}{100}$, or 0.1. Multiplying 760 by this proportion gives $760(0.1)$, or 76, potatoes that she saved to plant next year.

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 720f7be4

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Percentages	Easy

ID: 720f7be4

The length of the base of a certain parallelogram is 89% of the height of the parallelogram. Which expression represents the length of the base of the parallelogram, where h is the height of the parallelogram?

A. $89h$

B. $0.089h$

C. $8.9h$

D. $0.89h$

ID: 720f7be4 Answer

Correct Answer: D

Rationale

Choice D is correct. It's given that the length of the base of the parallelogram is 89% of the height of the parallelogram. Since h is the height of the parallelogram, it follows that the length of the base of the parallelogram can be represented by the expression $\frac{89}{100}h$, or $0.89h$.

Choice A is incorrect. This expression represents $8{,}900\%$, not 89%, of the height of the parallelogram.

Choice B is incorrect. This expression represents 8.9%, not 89%, of the height of the parallelogram.

Choice C is incorrect. This expression represents 890%, not 89%, of the height of the parallelogram.

Question Difficulty: Easy

Question ID 70694eae

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Percentages	Easy

ID: 70694eae

There are a total of 840 seats in a school auditorium. During an assembly, students occupied 50% of the seats in the auditorium. How many seats did the students occupy during this assembly?

A. 25

B. 50

C. 420

D. 790

ID: 70694eae Answer

Correct Answer: C

Rationale

Choice C is correct. It's given that during an assembly, students occupied 50% of the 840 seats in the school auditorium. Therefore, the number of seats that the students occupied during this assembly can be calculated by multiplying the number of seats in the school auditorium by $\frac{50}{100}$. Thus, the students occupied $840\left(\frac{50}{100}\right)$, or 420, seats during this assembly.

Choice A is incorrect. This is approximately 3%, not 50%, of 840.

Choice B is incorrect. This is approximately 6%, not 50%, of 840.

Choice D is incorrect. This is approximately 94%, not 50%, of 840.

Question Difficulty: Easy

Question ID f76f5665

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Percentages	Easy

ID: f76f5665

Out of 300 seeds that were planted, 80% sprouted. How many of these seeds sprouted?

ID: f76f5665 Answer

Correct Answer: 240

Rationale

The correct answer is 240. It's given that 80% of the 300 seeds sprouted. Therefore, the number of seeds that sprouted can be calculated by multiplying the number of seeds that were planted by $\frac{80}{100}$, which gives $300\left(\frac{80}{100}\right)$, or 240.

Question Difficulty: Easy

Question ID 4d8e6223

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Percentages	Easy

ID: 4d8e6223

21 is 21% of what number?

A. 0

B. 1

C. 42

D. 100

ID: 4d8e6223 Answer

Correct Answer: D

Rationale

Choice D is correct. Let x represent the number that 21 is 21% of. It follows that $\frac{21}{x} = \frac{21}{100}$. Multiplying each side of this equation by x yields $21 = \frac{21x}{100}$. Multiplying each side of this equation by 100 yields $2{,}100 = 21x$. Dividing each side of this equation by 21 yields $100 = x$. Therefore, 21 is 21% of 100.

Choice A is incorrect. 21% of 0 is 0, not 21.

Choice B is incorrect. 21% of 1 is 0.21, not 21.

Choice C is incorrect. 21% of 42 is 8.82, not 21.

Question Difficulty: Easy