

Question ID ffbc7222

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Easy

ID: ffbc7222

There are **350** objects in a box. Of these objects, **4%** are balls. How many balls are in the box?

- A. **4**
- B. **14**
- C. **70**
- D. **346**

ID: ffbc7222 Answer

Correct Answer: B

Rationale

Choice B is correct. It’s given that **4%** of the **350** objects in the box are balls. Therefore, the number of balls in the box can be found by calculating **4%** of **350**, which is equal to **$350\left(\frac{4}{100}\right)$** , or **14**.

Choice A is incorrect. This is the percentage of objects in the box that are balls, not the number of balls in the box.

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 c03eb41d

Assessment	Test	Domain	Skill	Difficulty
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ID: c03eb41d

What is 10% of 470?

- A. 37
- B. 47
- C. 423
- D. 460

ID: c03eb41d 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 9f6cae22

Assessment	Test	Domain	Skill	Difficulty
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ID: 9f6cae22

21 is 21% of what number?

- A. 0
- B. 1
- C. 42
- D. 100

ID: 9f6cae22 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

Question ID 4126585a

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Easy

ID: 4126585a

What percentage of 300 is 75?

- A. 25%
- B. 50%
- C. 75%
- D. 225%

ID: 4126585a 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 2f131b4b

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Easy

ID: 2f131b4b

What is **23%** of **100**?

- A. **23**
- B. **46**
- C. **77**
- D. **123**

ID: 2f131b4b Answer

Correct Answer: A

Rationale

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

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

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

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

Question Difficulty: Easy

Question ID bfdc6685

Assessment	Test	Domain	Skill	Difficulty
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ID: bfdc6685

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

ID: bfdc6685 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 08e4ae37

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Easy

ID: 08e4ae37

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: 08e4ae37 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 99130287

Assessment	Test	Domain	Skill	Difficulty
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ID: 99130287

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: 99130287 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**($\frac{50}{100}$), 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 280d0da0

Assessment	Test	Domain	Skill	Difficulty
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ID: 280d0da0

ID: 280d0da0 Answer

Correct Answer: B

What is 20% of 440?

Rationale

- A. 44

Choice B is correct. 20% of 440 can be calculated as $(\frac{20}{100})(440)$, 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 32b8e609

Assessment	Test	Domain	Skill	Difficulty
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ID: 32b8e609

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: 32b8e609 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 e6afc3ad

Assessment	Test	Domain	Skill	Difficulty
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ID: e6afc3ad

What is 10% of 370?

- A. 27
- B. 37
- C. 333
- D. 360

ID: e6afc3ad 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 213243b3

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Problem-Solving and Data Analysis	Percentages	Easy

ID: 213243b3

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: 213243b3 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**($\frac{10}{100}$), 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