Perimeter Worksheets Questions and Answers PDF

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Part 1: Building a Foundation

What is the perimeter of a square with each side measuring 5 cm?

Hint: Remember the formula for the perimeter of a square.

- ◯ A) 10 cm
- ◯ B) 15 cm
- ◯ **C) 20 cm ✓**
- ◯ D) 25 cm

> The perimeter of a square is calculated by multiplying the length of one side by 4.

Which of the following shapes can have their perimeter calculated by summING the lengths of all sides? (Select all that apply)

Hint: Think about the shapes and how their perimeters are calculated.

- ☐ **A) Rectangle ✓**
- ☐ B) Circle
- ☐ **C) Triangle ✓**
- ☐ **D) Square ✓**

> The perimeter can be calculated for shapes with defined sides.

Explain in your own words what the perimeter of a shape represents and why it is important in real-world applications.

Hint: Consider the definition and practical uses of perimeter.

Perimeter represents the total distance around a shape, which is important for tasks like fencing and landscaping.

List the formulas for calculating the perimeter of the following shapes: Rectangle, Triangle.

Hint: Recall the formulas for each shape.

1. Rectangle

P = 2(length + width)

2. Triangle

P = side1 + side2 + side3

The perimeter of a rectangle is 2(length + width) and for a triangle, it is the sum of all sides.

Part 2: Understanding and Interpretation

If a rectangle has a length of 8 meters and a width of 3 meters, what is its perimeter?

Hint: Use the perimeter formula for a rectangle.

- ◯ A) 11 meters
- ◯ B) 16 meters
- ◯ **C) 22 meters ✓**
- ◯ D) 24 meters

The perimeter is calculated by adding the lengths of all sides.

Which statements are true about perimeter? (Select all that apply)

Hint: Consider the properties and definitions of perimeter.

- [ ] A) It is always measured in square units.
- [ ] **B) It is the total length around a shape. ✓**
- [ ] **C) It can be used to determine the amount of material needed to fence a garden. ✓**
- [ ] D) It is the same as the area of a shape.

Perimeter is a measure of the total length around a shape.

Describe how you would find the perimeter of an irregular polygon. What steps would you take?

Hint: Think about measuring and adding the lengths of the sides.

To find the perimeter, measure each side and sum the lengths.

Part 3: Application and Analysis

A triangular park has sides measuring 50 meters, 70 meters, and 80 meters. What is the perimeter of the park?

Hint: Add the lengths of all three sides.

- ○ A) 150 meters
- ○ **B) 180 meters ✓**
- ○ C) 200 meters
- ○ D) 210 meters

The perimeter is the sum of all sides of the triangle.

A farmer wants to fence a rectangular field that is 100 meters long and 50 meters wide. Which of the following are true about the perimeter of the field? (Select all that apply)

Hint: Calculate the perimeter using the given dimensions.

- [ ] A) The perimeter is 150 meters.
- [ ] **B) The perimeter is 300 meters. ✓**
- [ ] **C) The farmer needs 300 meters of fencing. ✓**
- [ ] **D) The perimeter can be calculated using the formula 2(length + width). ✓**

> The perimeter can be calculated using the formula for rectangles.

Imagine you are designing a rectangular garden. If you have 60 meters of fencing available, what are some possible dimensions for the length and width of the garden?

Hint: Consider the relationship between length, width, and perimeter.

> **Possible dimensions must add up to 30 meters when using the perimeter formula.**

Part 4: Evaluation and Creation

Which of the following statements best describes the relationship between the perimeter and area of a shape?

Hint: Think about how perimeter and area are defined.

- ○ A) They are always equal.
- ○ **B) Perimeter is a measure of length, while area is a measure of surface. ✓**
- ○ C) Both are measured in square units.
- ○ D) Increasing the perimeter always increases the area.

> Perimeter measures length while area measures surface, and they are not always related.

Consider a square and a rectangle with the same perimeter. Which of the following statements are true? (Select all that apply)

Hint: Think about the properties of squares and rectangles.

- [ ] A) The square will always have a larger area.
- [ ] **B) The rectangle can have different dimensions but the same perimeter. ✓**
- [ ] **C) Both shapes have the same number of sides. ✓**
- [ ] **D) The perimeter formula for both shapes is the same. ✓**

> A square and rectangle can have the same perimeter but different areas.

Analyze the perimeter of a hexagon where each side measures 10 cm. Discuss how changing one side affects the overall perimeter.

Hint: Consider the definition of perimeter and how it is calculated.

> **Changing one side of a hexagon will directly affect the total perimeter by the same amount.**

A homeowner wants to install a new fence around a circular garden with a diameter of 10 meters. If the cost of fencing is $5 per meter, what is the total cost? (Use π ≈ 3.14)

Hint: Calculate the circumference to find the total cost.

- ◯ **A) $31.40 ✓**
- ◯ B) $50.00
- ◯ C) $62.80
- ◯ D) $157.00

> The total cost is calculated by multiplying the circumference by the cost per meter.

Evaluate the following scenarios and select which ones correctly describe situations involving perimeter. (Select all that apply)

Hint: Think about the practical applications of perimeter.

- [x] **A) Calculating the distance around a circular track. ✓**
- [ ] B) Measuring the space inside a room.
- [x] **C) Determining the length of ribbon needed to wrap a gift box. ✓**
- [ ] D) Finding the amount of paint needed to cover a wall.

> Perimeter is used in various real-world scenarios, especially in measuring boundaries.

Design a floor plan for a rectangular room with a perimeter of 24 meters. Include at least two different sets of dimensions and explain your reasoning.

Hint: Consider how length and width relate to perimeter.

> **Possible dimensions must add up to 12 meters when using the perimeter formula.**