1. **Why is perimeter not generally a measure of area?**
   A. Area and perimeter always have the same value
   B. Different regions can have the same perimeter but different areas
   C. Perimeter is always greater than area
   D. Perimeter is used only for circles (B)

Explanation : Perimeter measures boundary length, while area measures the surface covered.

2. **Which pair of rectangles has the same perimeter but different areas?**
   A. 1 × 10 and 5 × 6
   B. 2 × 4 and 2 × 4
   C. 2 × 5 and 4 × 6
   D. 3 × 3 and 3 × 3 (A)

Explanation: Both have perimeter 22 units, but their areas are 10 and 30 square units.

3. **A 2 cm × 8 cm rectangle and a 4 cm × 6 cm rectangle have the same perimeter. Which has the larger area?**
   A. The 2 cm × 8 cm rectangle
   B. The 4 cm × 6 cm rectangle
   C. Neither has an area
   D. Both have equal areas (B)

Explanation: Their areas are 16 cm^2 and 24 cm^2 respectively.

4. **Which quantity tells how much surface a region covers?**
   A. Area
   B. Perimeter
   C. Boundary
   D. Number of sides (A)

Explanation: Area measures the amount of surface enclosed by a figure.

5. **Which quantity tells the total length of a region's boundary?**
   A. Area
   B. Perimeter
   C. Volume
   D. Diagonal (B)

Explanation : Perimeter is the sum of the lengths along the outer boundary.

6. **Can a figure with a larger perimeter have a smaller area than another figure?**
   A. Only when the figures have no boundary
   B. Only when both figures are squares
   C. Yes; a long, thin shape can have a large perimeter but a small area
   D. No; a larger perimeter always means a larger area (C)

Explanation : Boundary length and enclosed area do not always increase together.

7. **A 1 cm × 20 cm rectangle has area 20 cm^2 and perimeter 42 cm. A 5 cm × 5 cm square has area 25 cm^2 and perimeter 20 cm. What does this show?**
   A. Squares and rectangles cannot be compared
   B. A larger area always has a larger perimeter
   C. Rectangles never have area
   D. A larger perimeter can enclose a smaller area(D)

Explanation : The thin rectangle has a larger perimeter but a smaller area.

8. **Two regions have equal perimeter. What can definitely be concluded about their areas?**
   A. Both areas must be zero
   B. Their areas must be equal
   C. Nothing definite; their areas may be equal or different
   D. The first region must have a larger area (C)

Explanation : Equal boundary lengths do not guarantee equal areas.

9. **Two regions have equal area. What can definitely be concluded about their perimeters?**
   A. Nothing definite; their perimeters may be equal or different
   B. Their perimeters must both be 4 units
   C. The region with more sides must have a smaller perimeter
   D. Their perimeters must be equal (A)

Explanation : The same area can be arranged into different shapes with different perimeters.

10. **Why do we use unit squares to measure area?**
    A. They make every perimeter equal
    B. They convert every shape into a circle
    C. They measure only the boundary
    D. They cover a region with equal standard units of surface (D)

Explanation : Counting equal unit squares gives a consistent measure of area.