

# Measurement, Perimeter, and Area Foundations

Units, perimeter, rectangle and triangle area, and early measurement sense.

Name \_\_\_\_\_ Date \_\_\_\_\_

32 main 2-up grid 11 pages visible side quests

## Completion Reward



Shown here as a small pack artifact, not a preview destination.

### 1. Which unit would make the most sense for the length of a classroom?

- A. square meters
- B. cubic meters
- C. meters
- D. degrees

### 1.1. Which object has two endpoints?

- A. Line
- B. Ray
- C. Segment
- D. Plane

### 1.2. Angles that add to 90 degrees are:

- A. supplementary
- B. vertical
- C. complementary
- D. congruent

### 1.3. Angles that add to 180 degrees are:

- A. supplementary
- B. complementary
- C. adjacent only
- D. acute

### 1.4. If a triangle has angles 50 degrees and 60 degrees, the third angle is:

- A. 70 degrees
- B. 80 degrees
- C. 90 degrees
- D. 110 degrees

### 1.5. Perimeter measures:

- A. space inside a figure
- B. distance around a figure
- C. slant height only
- D. number of sides

### 2. Which unit makes the most sense for the area of a desk top?

- A. centimeters
- B. cubic centimeters
- C. square centimeters
- D. degrees

### 2.1. Which object has two endpoints?

- A. Line
- B. Ray
- C. Segment
- D. Plane

### 2.2. Angles that add to 90 degrees are:

- A. supplementary
- B. vertical
- C. complementary
- D. congruent

### 2.3. Angles that add to 180 degrees are:

- A. supplementary
- B. complementary
- C. adjacent only
- D. acute

### 2.4. If a triangle has angles 50 degrees and 60 degrees, the third angle is:

- A. 70 degrees
- B. 80 degrees
- C. 90 degrees
- D. 110 degrees

### 2.5. Perimeter measures:

- A. space inside a figure
- B. distance around a figure
- C. slant height only
- D. number of sides

### 3. What does perimeter measure?

- A. The space inside a figure
- B. The total distance around a figure
- C. The number of angles
- D. The height of a figure

### 3.1. Which object has two endpoints?

- A. Line
- B. Ray
- C. Segment
- D. Plane

### 3.2. Angles that add to 90 degrees are:

- A. supplementary
- B. vertical
- C. complementary
- D. congruent

### 3.3. Angles that add to 180 degrees are:

- A. supplementary
- B. complementary
- C. adjacent only
- D. acute

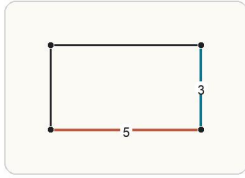
### 3.4. If a triangle has angles 50 degrees and 60 degrees, the third angle is:

- A. 70 degrees
- B. 80 degrees
- C. 90 degrees
- D. 110 degrees

### 3.5. Perimeter measures:

- A. space inside a figure
- B. distance around a figure
- C. slant height only
- D. number of sides

4. What does area measure?



Area measures how much surface is covered inside the figure, not the length around its boundary.

- A. The total distance around a figure
- B. Only the horizontal length
- C. The amount of space inside a figure
- D. Only the vertical length

4.3. Angles that add to 180 degrees are:

- A. supplementary
- B. complementary
- C. adjacent only
- D. acute

4.1. Which object has two endpoints?

- A. Line
- B. Ray
- C. Segment
- D. Plane

4.2. Angles that add to 90 degrees are:

- A. supplementary
- B. vertical
- C. complementary
- D. congruent

4.4. If a triangle has angles 50 degrees and 60 degrees, the third angle is:

- A. 70 degrees
- B. 80 degrees
- C. 90 degrees
- D. 110 degrees

4.5. Perimeter measures:

- A. space inside a figure
- B. distance around a figure
- C. slant height only
- D. number of sides

5. Which unit would be used for area?

- A. units
- B. degrees
- C. meters per second
- D. square units

5.1. Which object has two endpoints?

- A. Line
- B. Ray
- C. Segment
- D. Plane

5.2. Angles that add to 90 degrees are:

- A. supplementary
- B. vertical
- C. complementary
- D. congruent

5.3. Angles that add to 180 degrees are:

- A. supplementary
- B. complementary
- C. adjacent only
- D. acute

5.4. If a triangle has angles 50 degrees and 60 degrees, the third angle is:

- A. 70 degrees
- B. 80 degrees
- C. 90 degrees
- D. 110 degrees

5.5. Perimeter measures:

- A. space inside a figure
- B. distance around a figure
- C. slant height only
- D. number of sides

6. Which formula gives the area of a triangle?

- A. base + height
- B.  $2(\text{base} + \text{height})$
- C.  $\frac{1}{2} \times \text{base} \times \text{height}$
- D. side  $\times$  side

6.1. Which object has two endpoints?

- A. Line
- B. Ray
- C. Segment
- D. Plane

6.2. Angles that add to 90 degrees are:

- A. supplementary
- B. vertical
- C. complementary
- D. congruent

6.3. Angles that add to 180 degrees are:

- A. supplementary
- B. complementary
- C. adjacent only
- D. acute

6.4. If a triangle has angles 50 degrees and 60 degrees, the third angle is:

- A. 70 degrees
- B. 80 degrees
- C. 90 degrees
- D. 110 degrees

6.5. Perimeter measures:

- A. space inside a figure
- B. distance around a figure
- C. slant height only
- D. number of sides

**7. Which description matches area?**

- A. The amount of space inside a shape
- B. The distance around the outside of a shape
- C. The length of one side only
- D. The measure of a turn

**7.1. Which object has two endpoints?**

- A. Line
- B. Ray
- C. Segment
- D. Plane

**7.2. Angles that add to 90 degrees are:**

- A. supplementary
- B. vertical
- C. complementary
- D. congruent

**7.3. Angles that add to 180 degrees are:**

- A. supplementary
- B. complementary
- C. adjacent only
- D. acute

**7.4. If a triangle has angles 50 degrees and 60 degrees, the third angle is:**

- A. 70 degrees
- B. 80 degrees
- C. 90 degrees
- D. 110 degrees

**7.5. Perimeter measures:**

- A. space inside a figure
- B. distance around a figure
- C. slant height only
- D. number of sides

**8. What is the best next step to find the area of a rectangle if you know its length and width?**

- A. Add the length and width
- B. Subtract the width from the length
- C. Multiply the length by the width
- D. Divide the length by the width

**8.1. Which object has two endpoints?**

- A. Line
- B. Ray
- C. Segment
- D. Plane

**8.2. Angles that add to 90 degrees are:**

- A. supplementary
- B. vertical
- C. complementary
- D. congruent

**8.3. Angles that add to 180 degrees are:**

- A. supplementary
- B. complementary
- C. adjacent only
- D. acute

**8.4. If a triangle has angles 50 degrees and 60 degrees, the third angle is:**

- A. 70 degrees
- B. 80 degrees
- C. 90 degrees
- D. 110 degrees

**8.5. Perimeter measures:**

- A. space inside a figure
- B. distance around a figure
- C. slant height only
- D. number of sides

**9. A student says the area of a 4 by 7 rectangle is 22. What is the mistake?**

- A. They multiplied when they should have subtracted
- B. They forgot to divide by 2
- C. There is no mistake
- D. They added the side lengths instead of multiplying them

**9.1. Which object has two endpoints?**

- A. Line
- B. Ray
- C. Segment
- D. Plane

**9.2. Angles that add to 90 degrees are:**

- A. supplementary
- B. vertical
- C. complementary
- D. congruent

**9.3. Angles that add to 180 degrees are:**

- A. supplementary
- B. complementary
- C. adjacent only
- D. acute

**9.4. If a triangle has angles 50 degrees and 60 degrees, the third angle is:**

- A. 70 degrees
- B. 80 degrees
- C. 90 degrees
- D. 110 degrees

**9.5. Perimeter measures:**

- A. space inside a figure
- B. distance around a figure
- C. slant height only
- D. number of sides

**10. A student says the area of a 4-by-6 rectangle is 4 + 6. What is wrong?**

- A. Area uses multiplication, not addition
- B. Area should be  $4 \cdot 6$
- C. Perimeter and area are always the same
- D. You should divide 4 by 6

10.1. Which object has two endpoints?

- A. Line
- B. Ray
- C. Segment
- D. Plane

10.2. Angles that add to 90 degrees are:

- A. supplementary
- B. vertical
- C. complementary
- D. congruent

10.3. Angles that add to 180 degrees are:

- A. supplementary
- B. complementary
- C. adjacent only
- D. acute

10.4. If a triangle has angles 50 degrees and 60 degrees, the third angle is:

- A. 70 degrees
- B. 80 degrees
- C. 90 degrees
- D. 110 degrees

10.5. Perimeter measures:

- A. space inside a figure
- B. distance around a figure
- C. slant height only
- D. number of sides

**11. A rectangle has length 5 and width 3. Find its perimeter. Answer with a number.**

11.1. Which object has two endpoints?

- A. Line
- B. Ray
- C. Segment
- D. Plane

11.2. Angles that add to 90 degrees are:

- A. supplementary
- B. vertical
- C. complementary
- D. congruent

11.3. Angles that add to 180 degrees are:

- A. supplementary
- B. complementary
- C. adjacent only
- D. acute

11.4. If a triangle has angles 50 degrees and 60 degrees, the third angle is:

- A. 70 degrees
- B. 80 degrees
- C. 90 degrees
- D. 110 degrees

11.5. Perimeter measures:

- A. space inside a figure
- B. distance around a figure
- C. slant height only
- D. number of sides

**12. A rectangle has length 5 and width 3. Find its area. Answer with a number.**

12.1. Which object has two endpoints?

- A. Line
- B. Ray
- C. Segment
- D. Plane

12.2. Angles that add to 90 degrees are:

- A. supplementary
- B. vertical
- C. complementary
- D. congruent

12.3. Angles that add to 180 degrees are:

- A. supplementary
- B. complementary
- C. adjacent only
- D. acute

12.4. If a triangle has angles 50 degrees and 60 degrees, the third angle is:

- A. 70 degrees
- B. 80 degrees
- C. 90 degrees
- D. 110 degrees

12.5. Perimeter measures:

- A. space inside a figure
- B. distance around a figure
- C. slant height only
- D. number of sides

**13. A square has side length 7. Find its perimeter. Answer with a number.**

13.1. Which object has two endpoints?

- A. Line
- B. Ray
- C. Segment
- D. Plane

13.2. Angles that add to 90 degrees are:

- A. supplementary
- B. vertical
- C. complementary
- D. congruent

13.3. Angles that add to 180 degrees are:

- A. supplementary
- B. complementary
- C. adjacent only
- D. acute

13.4. If a triangle has angles 50 degrees and 60 degrees, the third angle is:

- A. 70 degrees
- B. 80 degrees
- C. 90 degrees
- D. 110 degrees

13.5. Perimeter measures:

- A. space inside a figure
- B. distance around a figure
- C. slant height only
- D. number of sides

**14. A square has side length 7. Find its area. Answer with a number.**

14.1. Which object has two endpoints?

- A. Line
- B. Ray
- C. Segment
- D. Plane

14.2. Angles that add to 90 degrees are:

- A. supplementary
- B. vertical
- C. complementary
- D. congruent

14.3. Angles that add to 180 degrees are:

- A. supplementary
- B. complementary
- C. adjacent only
- D. acute

14.4. If a triangle has angles 50 degrees and 60 degrees, the third angle is:

- A. 70 degrees
- B. 80 degrees
- C. 90 degrees
- D. 110 degrees

14.5. Perimeter measures:

- A. space inside a figure
- B. distance around a figure
- C. slant height only
- D. number of sides

**15. A regular pentagon has side length 6. Find its perimeter. Answer with a number.**

15.1. Which object has two endpoints?

- A. Line
- B. Ray
- C. Segment
- D. Plane

15.2. Angles that add to 90 degrees are:

- A. supplementary
- B. vertical
- C. complementary
- D. congruent

15.3. Angles that add to 180 degrees are:

- A. supplementary
- B. complementary
- C. adjacent only
- D. acute

15.4. If a triangle has angles 50 degrees and 60 degrees, the third angle is:

- A. 70 degrees
- B. 80 degrees
- C. 90 degrees
- D. 110 degrees

15.5. Perimeter measures:

- A. space inside a figure
- B. distance around a figure
- C. slant height only
- D. number of sides

16. A rectangle has length 9 and width 2. Find its perimeter. Answer with a number.

16.3. Angles that add to 180 degrees are:

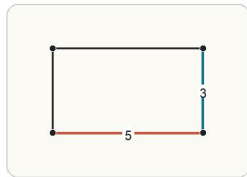
- A. supplementary
- B. complementary
- C. adjacent only
- D. acute

17. A rectangle has length 9 and width 2. Find its area. Answer with a number.

17.3. Angles that add to 180 degrees are:

- A. supplementary
- B. complementary
- C. adjacent only
- D. acute

18. The rectangle has side lengths 5 and 3. What is its perimeter? Answer with a number.



Perimeter measures the total distance around the outside of the rectangle.

18.3. Angles that add to 180 degrees are:

- A. supplementary
- B. complementary
- C. adjacent only
- D. acute

16.1. Which object has two endpoints?

- A. Line
- B. Ray
- C. Segment
- D. Plane

16.4. If a triangle has angles 50 degrees and 60 degrees, the third angle is:

- A. 70 degrees
- B. 80 degrees
- C. 90 degrees
- D. 110 degrees

17.1. Which object has two endpoints?

- A. Line
- B. Ray
- C. Segment
- D. Plane

17.4. If a triangle has angles 50 degrees and 60 degrees, the third angle is:

- A. 70 degrees
- B. 80 degrees
- C. 90 degrees
- D. 110 degrees

18.1. Which object has two endpoints?

- A. Line
- B. Ray
- C. Segment
- D. Plane

18.4. If a triangle has angles 50 degrees and 60 degrees, the third angle is:

- A. 70 degrees
- B. 80 degrees
- C. 90 degrees
- D. 110 degrees

16.2. Angles that add to 90 degrees are:

- A. supplementary
- B. vertical
- C. complementary
- D. congruent

16.5. Perimeter measures:

- A. space inside a figure
- B. distance around a figure
- C. slant height only
- D. number of sides

17.2. Angles that add to 90 degrees are:

- A. supplementary
- B. vertical
- C. complementary
- D. congruent

17.5. Perimeter measures:

- A. space inside a figure
- B. distance around a figure
- C. slant height only
- D. number of sides

18.2. Angles that add to 90 degrees are:

- A. supplementary
- B. vertical
- C. complementary
- D. congruent

18.5. Perimeter measures:

- A. space inside a figure
- B. distance around a figure
- C. slant height only
- D. number of sides

19. A triangle has side lengths 7, 4, and 6. What is its perimeter? Answer with a number.

19.1. Which object has two endpoints?

- A. Line
- B. Ray
- C. Segment
- D. Plane

19.2. Angles that add to 90 degrees are:

- A. supplementary
- B. vertical
- C. complementary
- D. congruent

19.3. Angles that add to 180 degrees are:

- A. supplementary
- B. complementary
- C. adjacent only
- D. acute

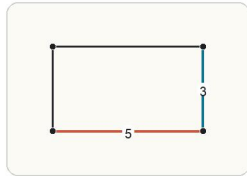
19.4. If a triangle has angles 50 degrees and 60 degrees, the third angle is:

- A. 70 degrees
- B. 80 degrees
- C. 90 degrees
- D. 110 degrees

19.5. Perimeter measures:

- A. space inside a figure
- B. distance around a figure
- C. slant height only
- D. number of sides

20. The rectangle has side lengths 5 and 3. What is its area? Answer with a number.



Area of a rectangle counts the square units inside, so multiply the two side lengths.

20.1. Which object has two endpoints?

- A. Line
- B. Ray
- C. Segment
- D. Plane

20.2. Angles that add to 90 degrees are:

- A. supplementary
- B. vertical
- C. complementary
- D. congruent

20.3. Angles that add to 180 degrees are:

- A. supplementary
- B. complementary
- C. adjacent only
- D. acute

20.4. If a triangle has angles 50 degrees and 60 degrees, the third angle is:

- A. 70 degrees
- B. 80 degrees
- C. 90 degrees
- D. 110 degrees

20.5. Perimeter measures:

- A. space inside a figure
- B. distance around a figure
- C. slant height only
- D. number of sides

21. A square has side length 6. What is its area? Answer with a number.

21.1. Which object has two endpoints?

- A. Line
- B. Ray
- C. Segment
- D. Plane

21.2. Angles that add to 90 degrees are:

- A. supplementary
- B. vertical
- C. complementary
- D. congruent

21.3. Angles that add to 180 degrees are:

- A. supplementary
- B. complementary
- C. adjacent only
- D. acute

21.4. If a triangle has angles 50 degrees and 60 degrees, the third angle is:

- A. 70 degrees
- B. 80 degrees
- C. 90 degrees
- D. 110 degrees

21.5. Perimeter measures:

- A. space inside a figure
- B. distance around a figure
- C. slant height only
- D. number of sides

**22. If a region covers 9 unit squares, what is its area? Answer with a number.**

22.1. Which object has two endpoints?

- A. Line
- B. Ray
- C. Segment
- D. Plane

22.2. Angles that add to 90 degrees are:

- A. supplementary
- B. vertical
- C. complementary
- D. congruent

22.3. Angles that add to 180 degrees are:

- A. supplementary
- B. complementary
- C. adjacent only
- D. acute

22.4. If a triangle has angles 50 degrees and 60 degrees, the third angle is:

- A. 70 degrees
- B. 80 degrees
- C. 90 degrees
- D. 110 degrees

22.5. Perimeter measures:

- A. space inside a figure
- B. distance around a figure
- C. slant height only
- D. number of sides

**23. A rectangle has perimeter 18 and one side length 4. Find the other side length. Answer with a number.**

23.1. Which object has two endpoints?

- A. Line
- B. Ray
- C. Segment
- D. Plane

23.2. Angles that add to 90 degrees are:

- A. supplementary
- B. vertical
- C. complementary
- D. congruent

23.3. Angles that add to 180 degrees are:

- A. supplementary
- B. complementary
- C. adjacent only
- D. acute

23.4. If a triangle has angles 50 degrees and 60 degrees, the third angle is:

- A. 70 degrees
- B. 80 degrees
- C. 90 degrees
- D. 110 degrees

23.5. Perimeter measures:

- A. space inside a figure
- B. distance around a figure
- C. slant height only
- D. number of sides

**24. A triangle has base 8 and height 5. Find its area. Answer with a number.**

24.1. Which object has two endpoints?

- A. Line
- B. Ray
- C. Segment
- D. Plane

24.2. Angles that add to 90 degrees are:

- A. supplementary
- B. vertical
- C. complementary
- D. congruent

24.3. Angles that add to 180 degrees are:

- A. supplementary
- B. complementary
- C. adjacent only
- D. acute

24.4. If a triangle has angles 50 degrees and 60 degrees, the third angle is:

- A. 70 degrees
- B. 80 degrees
- C. 90 degrees
- D. 110 degrees

24.5. Perimeter measures:

- A. space inside a figure
- B. distance around a figure
- C. slant height only
- D. number of sides

**25. A parallelogram has base 9 and height 4. Find its area. Answer with a number.**

25.1. Which object has two endpoints?

- A. Line
- B. Ray
- C. Segment
- D. Plane

25.2. Angles that add to 90 degrees are:

- A. supplementary
- B. vertical
- C. complementary
- D. congruent

25.3. Angles that add to 180 degrees are:

- A. supplementary
- B. complementary
- C. adjacent only
- D. acute

25.4. If a triangle has angles 50 degrees and 60 degrees, the third angle is:

- A. 70 degrees
- B. 80 degrees
- C. 90 degrees
- D. 110 degrees

25.5. Perimeter measures:

- A. space inside a figure
- B. distance around a figure
- C. slant height only
- D. number of sides

**26. A rectangle has area 24 square units and one side length 6. Find the other side length. Answer with a number.**

26.1. Which object has two endpoints?

- A. Line
- B. Ray
- C. Segment
- D. Plane

26.2. Angles that add to 90 degrees are:

- A. supplementary
- B. vertical
- C. complementary
- D. congruent

26.3. Angles that add to 180 degrees are:

- A. supplementary
- B. complementary
- C. adjacent only
- D. acute

26.4. If a triangle has angles 50 degrees and 60 degrees, the third angle is:

- A. 70 degrees
- B. 80 degrees
- C. 90 degrees
- D. 110 degrees

26.5. Perimeter measures:

- A. space inside a figure
- B. distance around a figure
- C. slant height only
- D. number of sides

**27. A square has perimeter 36. Find its side length. Answer with a number.**

27.1. Which object has two endpoints?

- A. Line
- B. Ray
- C. Segment
- D. Plane

27.2. Angles that add to 90 degrees are:

- A. supplementary
- B. vertical
- C. complementary
- D. congruent

27.3. Angles that add to 180 degrees are:

- A. supplementary
- B. complementary
- C. adjacent only
- D. acute

27.4. If a triangle has angles 50 degrees and 60 degrees, the third angle is:

- A. 70 degrees
- B. 80 degrees
- C. 90 degrees
- D. 110 degrees

27.5. Perimeter measures:

- A. space inside a figure
- B. distance around a figure
- C. slant height only
- D. number of sides

**28. Which statement is true?**

- A. Perimeter and area are always equal
- B. Two figures can have the same perimeter but different areas
- C. Area is found by adding side lengths
- D. Perimeter uses square units

**28.1. Which object has two endpoints?**

- A. Line
- B. Ray
- C. Segment
- D. Plane

**28.2. Angles that add to 90 degrees are:**

- A. supplementary
- B. vertical
- C. complementary
- D. congruent

**28.3. Angles that add to 180 degrees are:**

- A. supplementary
- B. complementary
- C. adjacent only
- D. acute

**28.4. If a triangle has angles 50 degrees and 60 degrees, the third angle is:**

- A. 70 degrees
- B. 80 degrees
- C. 90 degrees
- D. 110 degrees

**28.5. Perimeter measures:**

- A. space inside a figure
- B. distance around a figure
- C. slant height only
- D. number of sides

**29. A student uses the slanted side instead of the height to find the area of a parallelogram. What is wrong?**

- A. Area needs the perpendicular height, not just any side
- B. Parallelograms do not have area
- C. You should always use the perimeter first
- D. The slanted side must be doubled

**29.1. Which object has two endpoints?**

- A. Line
- B. Ray
- C. Segment
- D. Plane

**29.2. Angles that add to 90 degrees are:**

- A. supplementary
- B. vertical
- C. complementary
- D. congruent

**29.3. Angles that add to 180 degrees are:**

- A. supplementary
- B. complementary
- C. adjacent only
- D. acute

**29.4. If a triangle has angles 50 degrees and 60 degrees, the third angle is:**

- A. 70 degrees
- B. 80 degrees
- C. 90 degrees
- D. 110 degrees

**29.5. Perimeter measures:**

- A. space inside a figure
- B. distance around a figure
- C. slant height only
- D. number of sides

**30. A triangle has base 8 and height 5. What is its area? Answer with a number.****30.1. Which object has two endpoints?**

- A. Line
- B. Ray
- C. Segment
- D. Plane

**30.2. Angles that add to 90 degrees are:**

- A. supplementary
- B. vertical
- C. complementary
- D. congruent

**30.3. Angles that add to 180 degrees are:**

- A. supplementary
- B. complementary
- C. adjacent only
- D. acute

**30.4. If a triangle has angles 50 degrees and 60 degrees, the third angle is:**

- A. 70 degrees
- B. 80 degrees
- C. 90 degrees
- D. 110 degrees

**30.5. Perimeter measures:**

- A. space inside a figure
- B. distance around a figure
- C. slant height only
- D. number of sides

**31. A rectangle has perimeter 18 and one side length 4. What is the other side length? Answer with a number.**

31.1. Which object has two endpoints?

- A. Line
- B. Ray
- C. Segment
- D. Plane

31.2. Angles that add to 90 degrees are:

- A. supplementary
- B. vertical
- C. complementary
- D. congruent

31.3. Angles that add to 180 degrees are:

- A. supplementary
- B. complementary
- C. adjacent only
- D. acute

31.4. If a triangle has angles 50 degrees and 60 degrees, the third angle is:

- A. 70 degrees
- B. 80 degrees
- C. 90 degrees
- D. 110 degrees

31.5. Perimeter measures:

- A. space inside a figure
- B. distance around a figure
- C. slant height only
- D. number of sides

**32. A rectangle has area 24 square units and one side length 6. What is the other side length? Answer with a number.**

32.1. Which object has two endpoints?

- A. Line
- B. Ray
- C. Segment
- D. Plane

32.2. Angles that add to 90 degrees are:

- A. supplementary
- B. vertical
- C. complementary
- D. congruent

32.3. Angles that add to 180 degrees are:

- A. supplementary
- B. complementary
- C. adjacent only
- D. acute

32.4. If a triangle has angles 50 degrees and 60 degrees, the third angle is:

- A. 70 degrees
- B. 80 degrees
- C. 90 degrees
- D. 110 degrees

32.5. Perimeter measures:

- A. space inside a figure
- B. distance around a figure
- C. slant height only
- D. number of sides