

Geometry & Measurement

1 Area and perimeter of a polygon

General Equation:

Area

The measure of the surface of a two-dimensional shape

Perimeter

The measure of the distance around a two-dimensional shape

Example 1: The lengths of an n -sided figure are each doubled. If the perimeter of the original n -sided figure was P , what is the value of the new perimeter?

Example 2: A circle inscribed in a box has a radius equal to half of the diameter of the box. What area of the circle is not in the square if the radius is 1?

Example 3: A pizza box has a perimeter that is 1.5 times the circumference of the pizza. If the pizza has a diameter of 16 inches, what is the difference between the perimeter of the box and the circumference of the pizza?

MEDIUM

1. **Equation/Strategy:** _____

Solve:

- (A)
- (B)
- (C)
- (D)

(E)

Equation/Strategy: _____

Solve:

2. (A)
- (B)
- (C)
- (D)

ADVANCED

(E)

3. **Equation/Strategy:** _____

Solve:

- (A)
- (B)
- (C)
- (D)

(E)

Equation/Strategy:

Solve:

4. (A)
- (B)
- (C)
- (D)
- (E)



2 Area and circumference of a circle

General Equation:

Example 1:

Example 2:

Example 3:

MEDIUM

1. **Equation/Strategy:** _____

Solve:

(A)

(B)

(C)

(D)

(E)

Equation/Strategy: _____

Solve:

2. (A)

(B)

(C)

(D)

ADVANCED

(E)

3. **Equation/Strategy:** _____

Solve:

(A)

(B)

(C)

(D)

(E)

Equation/Strategy:

Solve:

4. (A)

(B)

(C)

(D)

(E)



3 Volume of a box, cube, and cylinder

General Equation:

Example 1:

Example 2:

Example 3:

MEDIUM

1. **Equation/Strategy:** _____

Solve:

(A)

(B)

(C)

(D)

(E)

Equation/Strategy: _____

Solve:

2. (A)

(B)

(C)

(D)

ADVANCED

(E)

3. **Equation/Strategy:** _____

Solve:

(A)

(B)

(C)

(D)

(E)

Equation/Strategy:

Solve:

4. (A)

(B)

(C)

(D)

(E)



4 Pythagorean theorem and special properties of isosceles, equilateral, and right triangles

General Equation:

Example 1:

Example 2:

Example 3:

MEDIUM

1. **Equation/Strategy:** _____

Solve:

- (A)
- (B)
- (C)
- (D)

(E)

Equation/Strategy: _____

Solve:

2. (A)
- (B)
- (C)
- (D)

ADVANCED

(E)

3. **Equation/Strategy:** _____

Solve:

- (A)
- (B)
- (C)
- (D)

(E)

Equation/Strategy:

Solve:

4. (A)
- (B)
- (C)
- (D)
- (E)



5 Properties of parallel and perpendicular lines

General Equation:

Example 1:

Example 2:

Example 3:

MEDIUM

1. **Equation/Strategy:** _____

Solve:

- (A)
- (B)
- (C)
- (D)

(E)

Equation/Strategy: _____

Solve:

2. (A)
- (B)
- (C)
- (D)

ADVANCED

(E)

3. **Equation/Strategy:** _____

Solve:

- (A)
- (B)
- (C)
- (D)

(E)

Equation/Strategy:

Solve:

4. (A)
- (B)
- (C)
- (D)
- (E)



6 Slope

General Equation:

Example 1:

Example 2:

Example 3:

MEDIUM

1. **Equation/Strategy:** _____

Solve:

- (A)
- (B)
- (C)
- (D)

(E)

Equation/Strategy: _____

Solve:

2. (A)
- (B)
- (C)
- (D)

ADVANCED

(E)

3. **Equation/Strategy:** _____

Solve:

- (A)
- (B)
- (C)
- (D)

(E)

Equation/Strategy:

Solve:

4. (A)
- (B)
- (C)
- (D)
- (E)



7 Similarity

General Equation:

Example 1:

Example 2:

Example 3:

MEDIUM

1. **Equation/Strategy:** _____

Solve:

- (A)
- (B)
- (C)
- (D)

(E)

Equation/Strategy: _____

Solve:

2. (A)
- (B)
 - (C)
 - (D)

ADVANCED

(E)

3. **Equation/Strategy:** _____

Solve:

- (A)
- (B)
- (C)
- (D)

(E)

Equation/Strategy:

Solve:

4. (A)
- (B)
 - (C)
 - (D)
 - (E)



8 Transformations

General Equation:

Example 1:

Example 2:

Example 3:

MEDIUM

1. **Equation/Strategy:** _____

Solve:

(A)

(B)

(C)

(D)

(E)

Equation/Strategy: _____

Solve:

2. (A)

(B)

(C)

(D)

ADVANCED

(E)

3. **Equation/Strategy:** _____

Solve:

(A)

(B)

(C)

(D)

(E)

Equation/Strategy:

Solve:

4. (A)

(B)

(C)

(D)

(E)



9 Coordinate geometry

General Equation:

Example 1:

Example 2:

Example 3:

MEDIUM

1. **Equation/Strategy:** _____

Solve:

(A)

(B)

(C)

(D)

(E)

Equation/Strategy: _____

Solve:

2. (A)

(B)

(C)

(D)

ADVANCED

(E)

3. **Equation/Strategy:** _____

Solve:

(A)

(B)

(C)

(D)

(E)

Equation/Strategy:

Solve:

4. (A)

(B)

(C)

(D)

(E)



10 Geometric visualization

General Equation:

Example 1:

Example 2:

Example 3:

MEDIUM

1. **Equation/Strategy:** _____

Solve:

- (A)
- (B)
- (C)
- (D)

(E)

Equation/Strategy: _____

Solve:

2. (A)
- (B)
 - (C)
 - (D)

ADVANCED

(E)

3. **Equation/Strategy:** _____

Solve:

- (A)
- (B)
- (C)
- (D)

(E)

Equation/Strategy:

Solve:

4. (A)
- (B)
 - (C)
 - (D)
 - (E)

