# ***Grade 5 Target K***

## ***Domain, Target, Standards, DOK, Vertical Alignments, Achievement Levels, Evidence Required, Vocabulary, Response Types, Materials, Attributes, Question Types, and Question Banks (Examples)***


Content Domain: Geometry
Target K [s]: 5.G.B Classify two-dimensional figures into categories based on their properties.
Standards included in Target 5.G.B, 5.G.B.3, 5.G.B.4
Vertical Alignment
Achievement Level Descriptors
Evidence Required
Vocabulary
Response Types
Materials
Attributes
Claim 1: Concepts and Procedures (DOK 2) Question Banks
Claim 3 Communicating Reasoning Question Banks


### ***Content Domain: Geometry***

### ***Target K [s]: 5.G.B Classify two-dimensional figures into categories based on their properties.***

### ***Standards included in Target 5.G.B, 5.G.B.3, 5.G.B.4***

**5.G.B** Classify two-dimensional figures into categories based on their properties.

**5.G.B.3** Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.

**5.G.B.4** Classify two-dimensional figures in a hierarchy based on properties.

### ***Vertical Alignment***

**Related Grade 4 standards**

4.G.A Draw and identify lines and angles, and classify shapes by properties of their lines and angles.

4.G.A.2 Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.


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4.G.A.3 Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.

**Related Grade 6 Standards**

6.G.A Solve real-world and mathematical problems involving area, surface area, and volume.

6.G.A.1 Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.

6.G.A.3 Draw polygons in the coordinate plane given the coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.

6.G.A.4 Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.

## ***Achievement Level Descriptors***

**Level 1** No Descriptor

**Level 2** Students should be able to classify two-dimensional figures into categories by their attributes or properties.

**Level 3** Students should be able to classify two-dimensional figures into subcategories by their attributes or properties**.**

**Level 4** No Descriptor

## ***Evidence Required***

1. The student classifies two-dimensional figures into categories and/or subcategories based on their properties.

## ***Vocabulary***
right, acute, obtuse, line segments, parallel, perpendicular, symmetrical, line of symmetry

## ***Response Types***
Matching Tables

## ***Materials***
grid, two-dimensional figures, points, lines, line segments, angles

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***Attributes***
Two-dimensional figures can have up to 10 sides.

***Claim 1: Concepts and Procedures (DOK 2) Question Banks***
Students can explain and apply mathematical concepts and carry out mathematical procedures with precision and fluency.

**5.G.B.3 DOK Level 2**

Understand that attributes belonging to a category of two dimensional figures also belong to all subcategories of that category. For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.

**Evidence Required:**

The student classifies two-dimensional figures into categories and/or subcategories based on their properties.

**Question Type 1**: The student is presented with the name of a category/subcategory of shapes and one descriptive property of that category/subcategory.

All parallelograms have two pairs of opposite, parallel, equal-length sides.

Determine whether each polygon shown is also a parallelogram. Select Yes or No for each polygon.

| | Yes | No |
|---|---|---|
| Rectangle | ☐ | ☐ |
| Trapezoid | ☐ | ☐ |
| Rhombus | ☐ | ☐ |

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Rubric: (1 point) The student correctly identifies if the given polygon is a parallelogram for all answer choices (e.g., Y, N, Y).

Response Type: Matching Table

**Question Type 2**: The student is presented with three to six two-dimensional figures and categories/subcategories in a table.

Determine if each polygon is also a rhombus.

Select Yes for each polygon that is a rhombus and No for each polygon that is not a rhombus.

| | Yes | No |
|---|---|---|
| Rectangle | | |
| Trapezoid | | |
| Square | | |
| Parallelogram | | |
| Hexagon | | |

Rubric: (1 point) The student correctly identifies each shape (e.g., N, N, Y, N, N).

Response Type: Matching Tables

## ***Claim 3 Communicating Reasoning Question Banks***

Claim Descriptors and Targets

Students can clearly and precisely construct viable arguments to support their own reasoning and to critique the reasoning of others.

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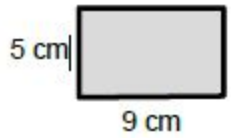
*Example 1*

Carrie saw the figure below and said that its area is 5 × 9 = 45 square centimeters.




Which statement best supports Carrie's claim?

A. It is true if the opposite sides have the same length.
B. It is true if the figure is a rectangle.
C. It is false if the opposite sides have the same length.
D. It is false if the figure is a rectangle.

Rubric: (1 point) The student selects the correct statement (e.g., B).

Response Type: Multiple Choice, single correct response

*Example 2*

Patrick is learning about quadrilaterals. He was given the following true statements.

- Opposite sides of all parallelograms have the same length.
- Opposite sides of all rectangles have the same length.
- All sides of a square have the same length.
- All rectangles are parallelograms.
- All rectangles have right angles.
- All squares have right angles.

Based on this information, Patrick assumes the following statements are always true. Which statement is not supported
by the given information?

A. All squares are rectangles.
B. All squares are parallelograms.
C. All parallelograms are rectangles.
D. All parallelograms are quadrilaterals.

Rubric: (1 point) The student selects the correct response (e.g., C).
Response Type: Multiple choice, single correct response

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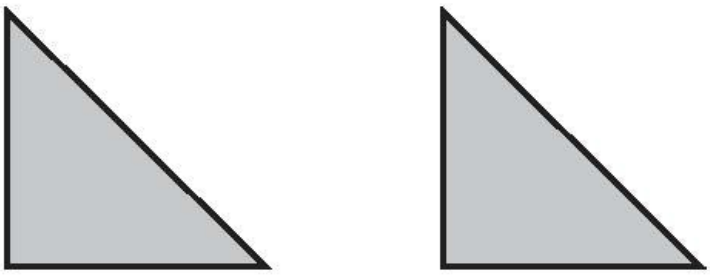
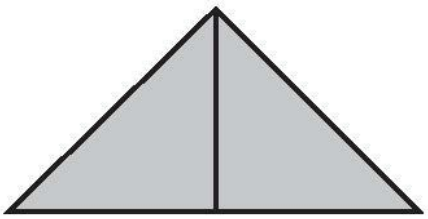
*Example 3*

Nora has drawn two identical isosceles right triangles.



Here is a way to put them together so that they share a side and make another triangle.



Select all the quadrilaterals Nora can make with these triangles if she puts them together so that they share a side.

A. A square
B. A rectangle that is not a square
C. A rhombus that is not a square
D. A parallelogram that is not a rectangle

Rubric: (1 point) The student selects the possible cases (A and D).

Response Type: Multiple Choice, multiple select response