**Geometry Assessment Interview Project** Teacher Name **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

This interview involves assessing learners on the Van Hiele Levels 0-2 of Geometric Reasoning.

1. Take this interview yourself, think about your other experiences with geometry, and rate your own level (0, 1, 2, 3, or 4), along with your rationale for this rating. [15 points]

Also feel free to make adjustments to the interview with a child as you pursue their personal growth in understanding!



Teacher Name: \_\_\_\_\_\_\_\_\_\_

Put an S on each square, an R on each rectangle, a P on each parallelogram, and a B on each rhombus, a T on each trapezoid, and a K on each kite.

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**Follow up questions:**

What would you tell someone to look for if they had to pick out all of the rectangles in this sheet of figures?

Can you make a shorter list? What is essential in the definition of a rectangle.

Is shape 2 a rectangle? \_\_\_\_\_

Is shape 9 a parallelogram? \_\_\_\_\_ [10 points]

Teacher Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Put a T on each triangle.

[5 points}

**Follow up questions:**

What would you tell someone to look for if they had to pick out all of the triangles in this sheet of figures?

Could you make a shorter list? i.e., What are the main properties of all triangles?

Which shapes are right triangles?

Which shapes are equilateral triangles?

What other classifications of triangles do you recall?

 [10 points]

Teacher Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Sort the following triangles. How are you forming your subgroups?

Sort the following quadrilaterals. How are you forming your subgroups?



 [10 Points]

**What’s My Shape? Games**

Script (Carefully give the directions below.)

1. I’m going to show you a sheet of paper with some clues about a certain shape. I will uncover clues one at a time.

2. Stop me when you have just enough clues to know for sure what type of shape it is. Ask for another clue if you want one.

3. Make a careful drawing of the shape if you want to. Think aloud if you want to, and tell me what you are thinking about. A ruler and a protractor may be provided.

In your assessment of these two rounds (for your student and yourself), show the student’s drawing or give a careful description of what the student drew. See if they/you can name the shape. Also include which clues were necessary and your evaluation of the student’s accuracy for each round.

Teacher Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Round 1 Clues:

1. It is a closed figure with four straight sides.

2. It has two long sides and two short sides.

3. It has a right angle.

4. The two long sides are parallel.

5. It has two right angles.

6. The two long sides are not the same length.

7. The two short sides are not the same length.

8. The two short sides are not parallel.

9. The two long sides make right angles with one of the short sides.

10. It has only two right angles.

 [15 points]

Teacher Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Round 2 Clues:

1. It is a closed figure with three straight sides.

2. It has one longer side and two shorter sides.

3. It has a right angle.

4. Two sides are congruent.

5. It has two acute angles.

6. The two short sides are perpendicular.

7. The two acute angles are equal in measure.

 [15 points]

Here are two definitions of certain polygons:

Definition A: It is a quadrilateral having two pairs of parallel sides.

Definition B: It is a quadrilateral in which the sum of any two consecutive angles is 180°.

Do A and B define the same quadrilateral? Explain your reasoning.

 [10 points]

Complete the following statements (you can draw diagrams if you want):

1. In a 5-sided polygon, the number of diagonals which can be drawn from each vertex is \_\_\_\_\_\_ , and the total number of diagonals of the polygon is \_\_\_\_\_ .
2. In a 6-sided polygon, the number of diagonals which can be drawn from each vertex is \_\_\_\_\_\_ , and the total number of diagonals of the polygon is \_\_\_\_\_ .
3. In an n-sided polygon, the number of diagonals which can be drawn from each vertex is \_\_\_\_\_\_ , and the total number of diagonals of the polygon is \_\_\_\_\_ . Justify your answers.

[15 points]

Teacher Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Then interview a child (This assessment is suggested for upper elementary grades 5 or higher.), record only their first name and grade level, and assess their level on this benchmark (0, 1, or 2), along with your rationale. Provide a ruler and a protractor for this assessment. [15 points]

Child’s first name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grade level: \_\_\_\_\_\_\_\_\_\_

Also feel free to make adjustments to the interview with a child as you pursue their personal growth in understanding!



Student Name: \_\_\_\_\_\_\_\_\_\_

Put an S on each square, an R on each rectangle, a P on each parallelogram, and a B on each rhombus, a T on each trapezoid, and a K on each kite.

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**Follow up questions:**

What would you tell someone to look for if they had to pick out all of the rectangles in this sheet of figures?

Can you make a shorter list? i.e., What is essential in the definition of a rectangle?

Is shape 2 a rectangle? \_\_\_\_\_

Is shape 9 a parallelogram? \_\_\_\_\_ [10 points]

Student Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Put a T on each triangle.

[5 points}

**Follow up questions:**

What would you tell someone to look for if they had to pick out all of the triangles in this sheet of figures?

Could you make a shorter list? i.e., What are the main properties of all triangles?

Which shapes are right triangles?

Which shapes are equilateral triangles?

What other classifications of triangles do you recall?

 [10 points]

Teacher Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Sort the following triangles. How are you forming your subgroups?

Sort the following quadrilaterals. How are you forming your subgroups?



 [10 Points]

**What’s My Shape? Games**

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In your assessment of these two rounds (for your student and yourself), show the student’s drawing or give a careful description of what the student drew. See if they/you can name the shape. Also include which clues were necessary and your evaluation of the student’s accuracy for each round.

Teacher Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Round 1 Clues:

1. It is a closed figure with four straight sides.

2. It has two long sides and two short sides.

3. It has a right angle.

4. The two long sides are parallel.

5. It has two right angles.

6. The two long sides are not the same length.

7. The two short sides are not the same length.

8. The two short sides are not parallel.

9. The two long sides make right angles with one of the short sides.

10. It has only two right angles.

 [15 points]

Student Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Round 2 Clues:

1. It is a closed figure with three straight sides.

2. It has one longer side and two shorter sides.

3. It has a right angle.

4. Two sides are congruent.

5. It has two acute angles.

6. The two short sides are perpendicular.

7. The two acute angles are equal in measure.

 [15 points]

Here are two definitions of certain polygons:

Definition A: It is a quadrilateral having two pairs of parallel sides.

Definition B: It is a quadrilateral in which the sum of any two consecutive angles is 180°.

Do A and B define the same quadrilateral? Explain your reasoning.

 [10 points]

Complete the following statements (you can draw diagrams if you want):

1. In a 5-sided polygon, the number of diagonals which can be drawn from each vertex is \_\_\_\_\_\_ , and the total number of diagonals of the polygon is \_\_\_\_\_ .
2. In a 6-sided polygon, the number of diagonals which can be drawn from each vertex is \_\_\_\_\_\_ , and the total number of diagonals of the polygon is \_\_\_\_\_ .
3. In an n-sided polygon, the number of diagonals which can be drawn from each vertex is \_\_\_\_\_\_ , and the total number of diagonals of the polygon is \_\_\_\_\_ . Justify your answers.

[15 points]