

Varied Fluency

Step 8: Regular and Irregular Polygons

National Curriculum Objectives:

Mathematics Year 5: (5G2b) [Distinguish between regular and irregular polygons based on reasoning about equal sides and angles](#)

Differentiation:

Developing Questions to support being able to distinguish between regular and irregular polygons. Using regular and irregular triangles and quadrilaterals.

Expected Questions to support being able to distinguish between regular and irregular polygons. Using regular and irregular quadrilaterals, pentagons and hexagons.

Greater Depth Questions to support being able to distinguish between regular and irregular polygons. Includes all polygons up to decagons.

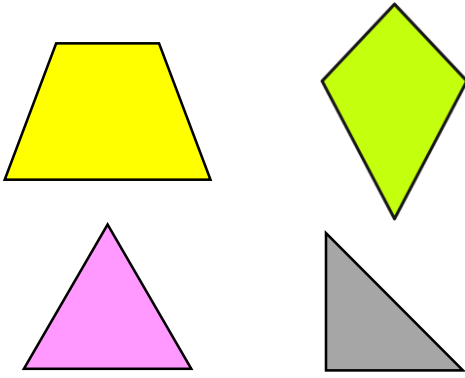
More [Year 5 Properties of Shapes](#) resources.

Did you like this resource? Don't forget to [review](#) it on our website.

Regular and Irregular Polygons

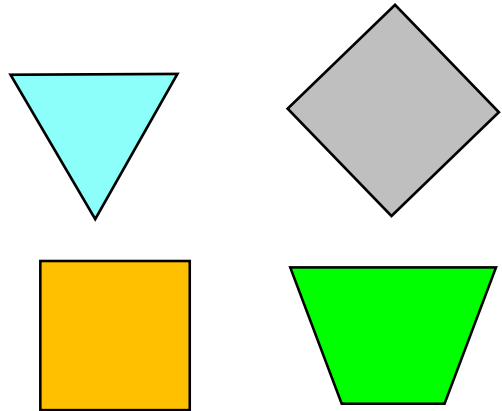
Regular and Irregular Polygons

1a. Circle the regular polygon.



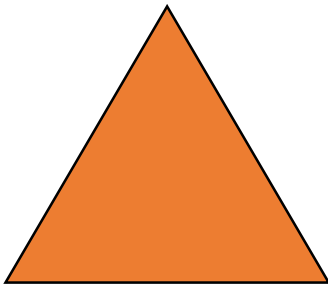
VF

1b. Circle the irregular polygon.



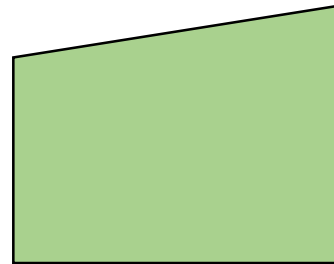
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2a. Use a ruler and a protractor to decide whether this is a regular or irregular triangle.



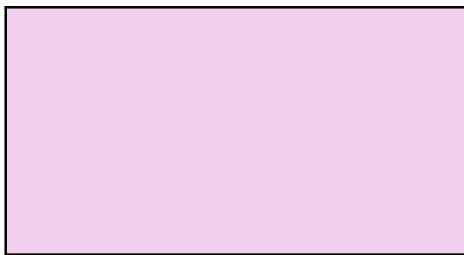
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2b. Use a ruler and a protractor to decide whether this is a regular or irregular quadrilateral.



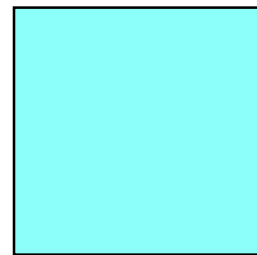
VF

3a. True or false?
This quadrilateral is a regular polygon.



VF

3b. True or false?
This quadrilateral is a regular polygon.



VF

4a. Draw a regular triangle. Measure the length of each side and the size of each angle to make sure that they are all the same.



VF

4b. Draw an irregular triangle. Measure the length of each side and the size of each angle to make sure that they are not all the same.

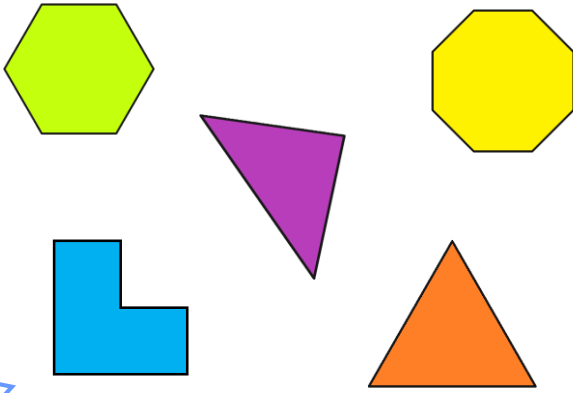


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Regular and Irregular Polygons

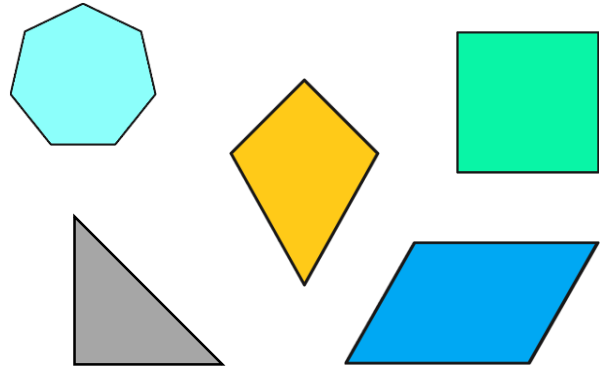
Regular and Irregular Polygons

5a. Circle the regular polygons.



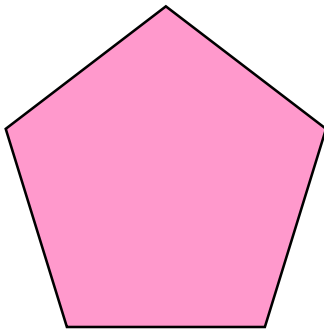
VF

5b. Circle the irregular polygons.



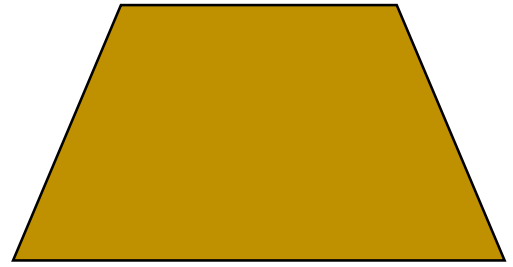
VF

6a. Identify the name of this shape. Use a ruler and a protractor to decide whether it's a regular or irregular polygon.



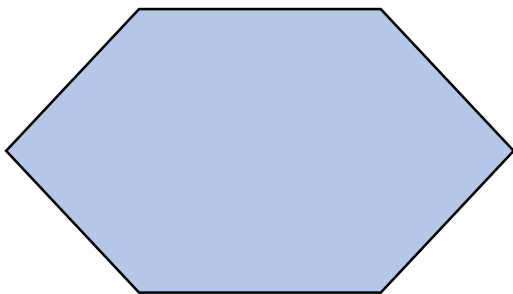
VF

6b. Identify the name of this shape. Use a ruler and a protractor to decide whether it's a regular or irregular polygon.



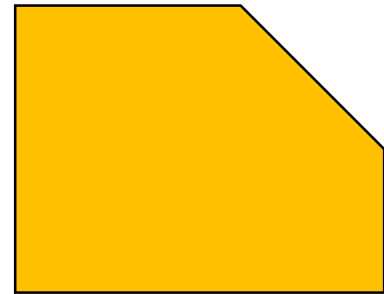
VF

7a. True or false?
This is a regular hexagon.



VF

7b. True or false?
This is an irregular pentagon.



VF

8a. Draw a regular hexagon. Measure the length of each side and the size of each angle to make sure that they are equal.



VF

8b. Draw an irregular hexagon. Measure the length of each side and the size of each angle to make sure that they are not all the same.

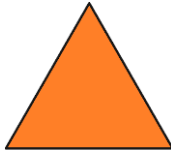
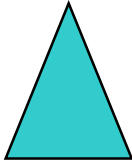
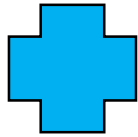
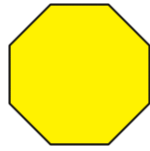
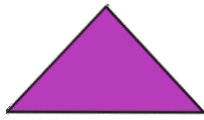
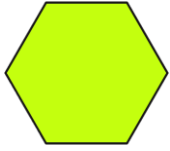


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Regular and Irregular Polygons

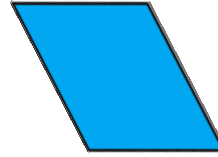
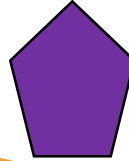
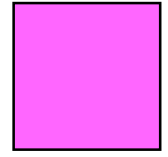
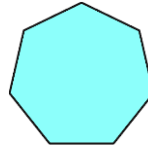
Regular and Irregular Polygons

9a. Circle the regular polygons.



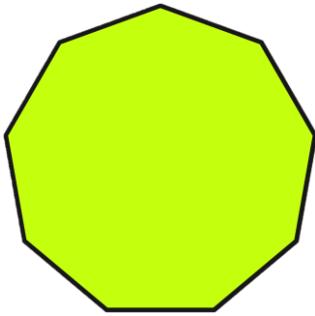
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9b. Circle the irregular polygons.



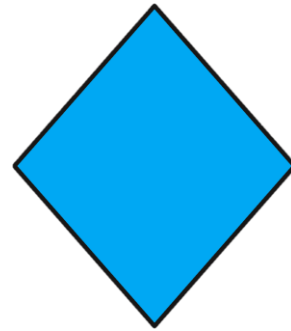
VF

10a. Identify the name of this shape. Use a ruler and a protractor to decide whether it's a regular or irregular polygon.



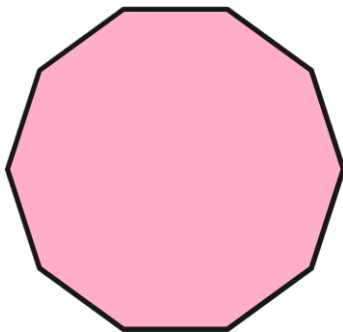
VF

10b. Identify the name of this shape. Use a ruler and a protractor to decide whether it's a regular or irregular polygon.



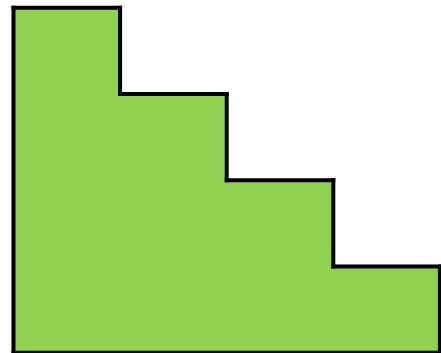
VF

11a. True or false? This is an irregular decagon.



VF

11b. True or false? This is a regular decagon.



VF

12a. Draw a regular octagon. Measure the length of each side and the size of each angle to make sure that they are equal.



VF

12b. Draw an irregular octagon. Measure the length of each side and the size of each angle to make sure that they are not all the same.

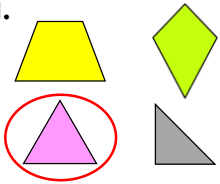


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Varied Fluency Regular and Irregular Polygons

Developing

1a.



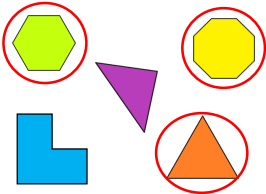
2a. The triangle is regular. It has 3 sides of equal length and each angle measures 60° .

3a. False

4a. The shape should have 3 sides of equal length and each angle should measure 60° .

Expected

5a.



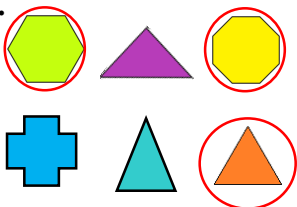
6a. A pentagon. It is a regular polygon as it has 5 sides of equal length and each angle measures 108° .

7a. False

8a. The shape should have 6 sides of equal length and each angle should measure 120° .

Greater Depth

9a.



10a. A nonagon. It has 9 sides of equal length and each angle measures 140° .

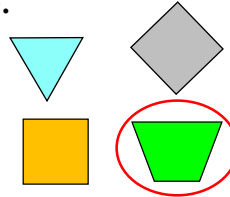
11a. False

12a. The shape should have 8 sides of equal length and each angle should measure 135° .

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Developing

1b.



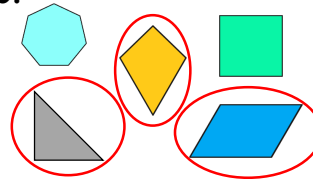
2b. The quadrilateral is irregular. It's length of sides and angles are different.

3b. True

4b. The shape should be a right-angled isosceles or scalene triangle.

Expected

5b.



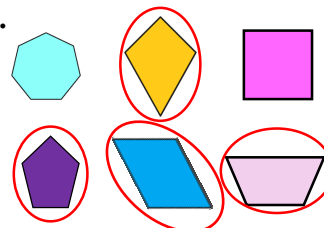
6b. A trapezium. It is an irregular polygon. It's length of sides and angles are different.

7b. True

8b. The shape should have 6 sides but they can not be of equal length. Angles will be of different sizes too.

Greater Depth

9b.



10b. A rhombus. It is an irregular polygon. The length of its sides are equal but the angles are different.

11b. False

12b. The shape should have 8 sides but they can not be of equal length. Angles will also be different sizes.