

Name _____

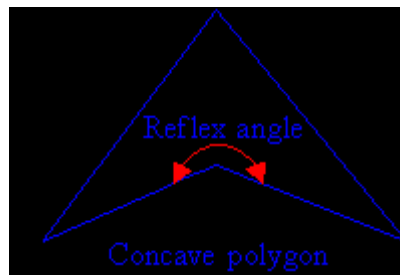
Date _____

Polygons

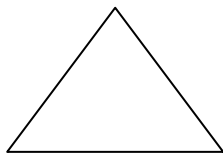
Polygons are geometrical shapes that have three or more sides. These geometrical figures are made up of straight lines and are closed shapes. This means that circles are not polygons because they are not made up of straight lines.

There are two types of polygons:

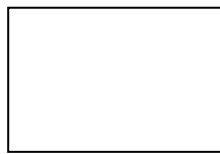
- 1) Concave polygons: are polygons that have reflex angles. Reflex angles are angles that are greater than 180° and less than 360° .



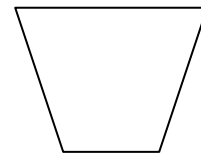
- 2) Convex polygons: are polygons that do not have reflex angles. Examples of convex polygons are: triangles, squares, rectangles, trapezoids.



Triangle



Rectangle



Trapezoid

Convex polygons are classified and named based on the number of sides they have.

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Polygons (Cont'd)

Number of Sides	Name of Polygon
3	Triangle
4	Quadrilateral
5	Pentagon
6	Hexagon
7	Heptagon
8	Octagon
9	Nonagon
10	Decagon
11	Hendecagon
12	Dodecagon

There is the same number of angles in a polygon as there are sides. For example, a triangle has 3 sides and 3 angles. A heptagon has 7 sides and 7 angles. A dodecagon has 12 sides and 12 angles.

There are two types of convex polygons:

- 1) Regular polygons: the polygon's sides are of equal length and its angles are the same size. Examples of regular polygons are: equilateral triangles, squares, etc.
- 2) Irregular polygons: if a polygon is not a regular polygon, then it is said to be an irregular polygon. This means that the lengths of the sides are not the same length and its angles are not the same size. Examples of irregular polygons are: rectangles, trapezoids, etc.

Polygons Questions

Multiple Choice:

1. Polygons are geometrical shapes that have:

- a. Three sides or less
- b. Three or more sides that consist of non-straight lines
- c. Three or more sides that consist of straight lines
- d. None of the above

2. Concave Polygons are:

- a. Polygons that have reflex angles
- b. Polygons that do not have reflex angles
- c. Polygons that have equal sides and equal angles
- d. None of the above

3. Reflex angles are:

- a. Angles that are greater than 180° and less than 360° .
- b. Angles that are greater than 360°
- c. Angles that are less than 180°
- d. None of the above

Matching:

____ 4. Convex Polygons

a) Polygons that consist of sides that have the same length

____ 5. Regular Polygons

b) Polygons that do not have reflex angles

____ 6. Irregular Polygons

c) Its angles do not have the same size

True or False:

____ 7. Circles are polygons.

____ 8. A decagon is a polygon with 10 sides.

____ 9. A pentagon has 5 sides and 6 angles.

____ 10. The sum of angles of a quadrilateral is 360° .

Polygons Answers

Multiple Choice:

1. Polygons are geometrical shapes that have:

- a. Three sides or less
- b. Three or more sides that consist of non-straight lines
- c. Three or more sides that consist of straight lines
- d. None of the above

2. Concave Polygons are:

- a. Polygons that have reflex angles
- b. Polygons that do not have reflex angles
- c. Polygons that have equal sides and equal angles
- d. None of the above

3. Reflex angles are:

- a. Angles that are greater than 180° and less than 360°
- b. Angles that are greater than 360°
- c. Angles that are less than 180°
- d. None of the above

Matching:

___b___ 4. Convex Polygons

a) Polygons that consist of sides that have the same length

___a___ 5. Regular Polygons

b) Polygons that do not have reflex angles

___c___ 6. Irregular Polygons

c) Its angles do not have the same size

True or False:

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