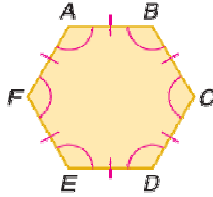


Lesson 4-2

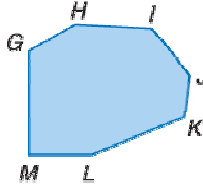
Example 1

Identify each polygon. Explain why it is regular or not regular.

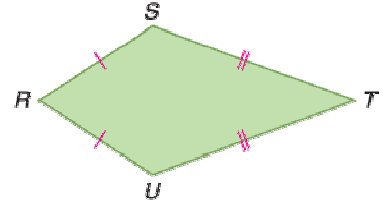
a.



b.



c.

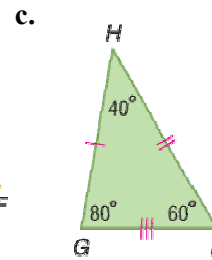
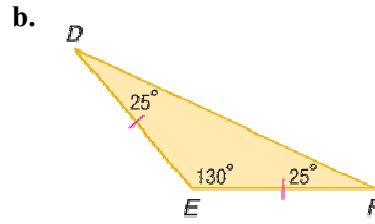
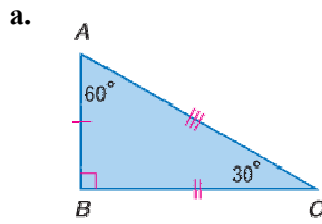


Solution

- a. The figure has 6 sides. It is hexagon $ABCDEF$. It is regular because the sides are congruent and the angles are congruent.
- b. The figure has 7 sides. It is heptagon $GHIJKLM$. It is not regular because the sides and the angles are not congruent.
- c. The figure has 4 sides. It is quadrilateral $RSTU$. It is not regular because not all of its sides are congruent and not all of its angles are congruent.

Example 2

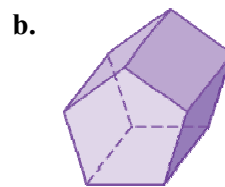
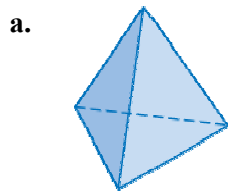
Classify each triangle.

**Solution**

- No sides are of equal length, so it is a scalene triangle. Angle B is a right angle, so $\triangle ABC$ is a right triangle.
- It is an isosceles triangle because two sides have equal length. Since $m\angle E > 90^\circ$, $\angle E$ is obtuse, so $\triangle DEF$ is an obtuse triangle.
- No sides are of equal length, so it is a scalene triangle. All angles of the triangle are acute, so $\triangle GHI$ is an acute triangle.

Example 3

Identify the number of faces, vertices, and edges for each figure.

**Solution**

- 4 faces, 4 vertices, 6 edges
- 7 faces, 10 vertices, 15 edges