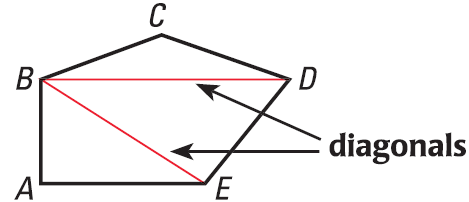
Geometry

8.1 Find Angle Measures in Polygons

Polygon

straight

Closed

* \_\_\_\_\_\_\_\_\_\_\_\_ figure made of \_\_\_\_\_\_\_\_\_\_\_\_\_ segments

Diagonal

vertices

nonconsecutive

* Segment that joins \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_

triangles

separated

All polygons can be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ into \_\_\_\_\_\_\_\_\_\_\_\_

180°

* The sum of the angles of a triangle is \_\_\_\_\_\_\_\_

3

pentagon

* For the \_\_\_\_\_\_\_\_\_\_, multiply that by \_\_\_

## Polygon Interior Angles Theorem

n-gon

interior

measures

Sum of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the \_\_\_\_\_\_\_\_\_\_\_\_ angles of a \_\_\_\_\_\_\_\_\_ is \_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

360°

quadrilateral

interior

measures

Sum of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the \_\_\_\_\_\_\_\_\_\_\_\_ angles of a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is \_\_\_\_\_\_

The coin is a regular 11-gon. Find the sum of the measures of the interior angles.



S = (n-2)180°

S = (11-2)180° = 1620

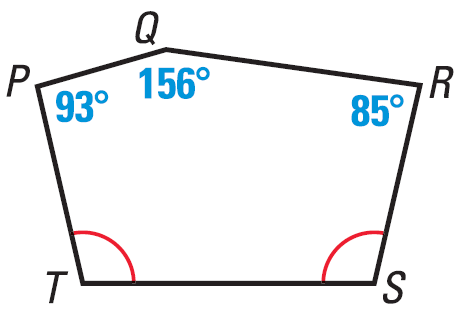
The sum of the measures of the interior angles of a convex polygon is 1440°. Classify the polygon by the number of sides.

1440° = (n-2)180°

8 = n-2

n = 10

Find mT



S = (n-2)180°

S = (5-2)180° = 540°

93° + 156° + 85° + x + x = 540°

334 + 2x = 540

2x = 206

x = 103

## Polygon Exterior Angles Theorem

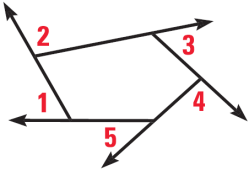
360°

convex

exterior

measures

Sum of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the \_\_\_\_\_\_\_\_\_\_\_ angles of a \_\_\_\_\_\_\_\_\_\_\_ polygon \_\_\_\_\_\_\_

What is the measure of an exterior angle of a regular pentagon?

What is the measure of an interior angle of a regular pentagon?

Assignment: 510 #2-34 even, 40-46 even = 21