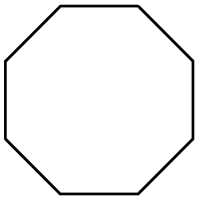
Name: _____ Period: _____

FINDING AREA of REGULAR POLYGONS—Let's get it on!

The UFC's cage is the shape of a **regular Octagon**. This is a figure with _____

_____.

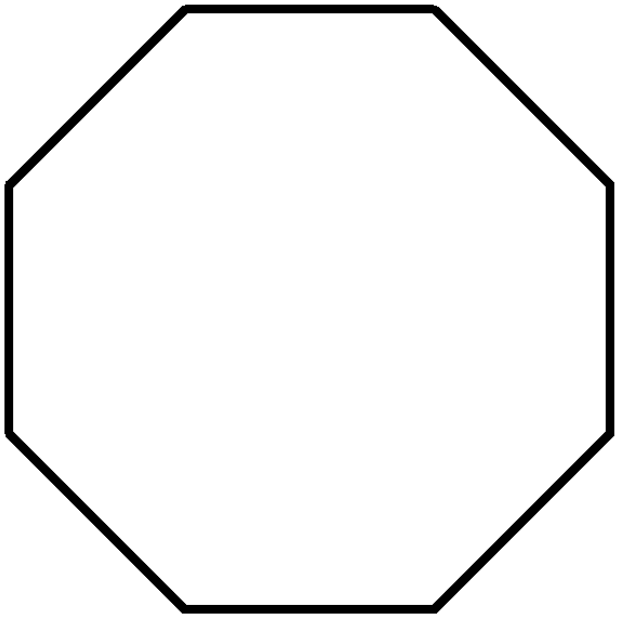


Each side of the cage is made up of a steel fence that is 12.5' wide. Let's sketch this in.

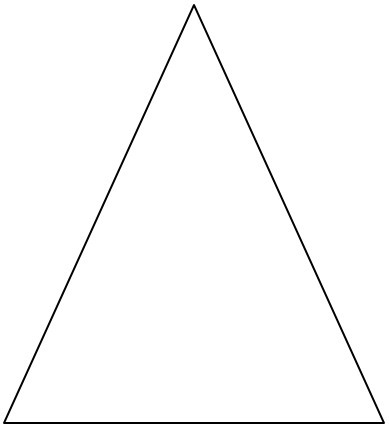
The **Perimeter** of this Octagon would therefore be _____.

The UFC needs to order a new canvas (mat) for their Octagonal Cage! We need to know what the **AREA** is–in square feet—of this Octagon!

So, let's break this octagon into **triangles**, since we know how to deal with them already!



Close-up of just 1 triangle



We need to know the **Angles** of the triangle to do our job. We can find these two ways:

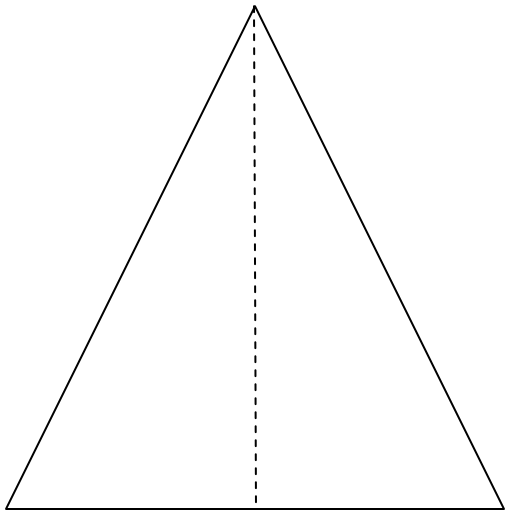
Central Angle 360° Method

Interior Angle Theorem Method

Name: _____ Period: _____

FINDING AREA of REGULAR POLYGONS—Let's get it on!

Now, let's find the **Area** of one Triangle. We got good at this last week ☺



AREA = ½ * _____ * _____ = _____
Base Height

Lastly, Remember that this area of _____ is for just _____.

However, the OCTAGON is made up of _____ of these triangles, so we have to

_____ to get the FINAL ANSWER of _____.

Now, IT'S TIME for your assignment! Let's get it on!