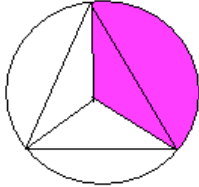
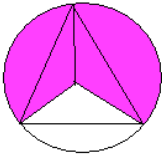


Turn Angles/Exterior Angles

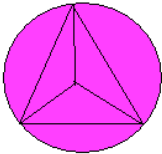
You know that if we go all the way around a circle, we pass through 360° . The same is true for exterior angles on polygons. Let's look at a triangle. Notice that the amount of turning that takes place in the first angle is equal to one-third of a circle.



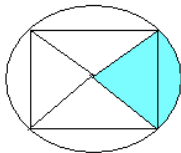
When we continue turning through the second angle, we cover another one-third of a circle.



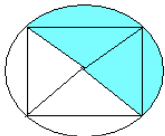
Now we'll turn through the third angle. We've gone through 360° of a circle.



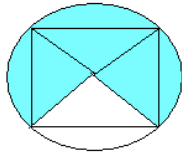
The same will happen with a square. Here's one angle:



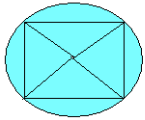
Two angles:



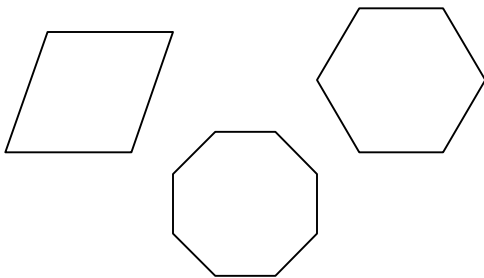
Three angles:



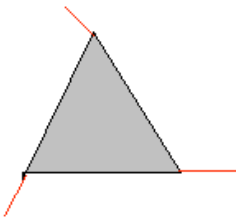
And four angles:



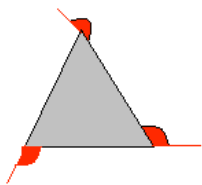
That's 360° . The same is true for these other figures. If we turn all the way around the figure, we will go 360° .



We can show the same thing by turning around the outside of the figure. First, extend each side of the figure like this:



Now we'll go around the sides and trace the angles at each turn. With a triangle, we'll have three turns.

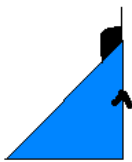


If we take the angles that we made at each turn and move them to the center of the triangle, we will see the same circle that we got before. The circle shows that we moved 360° .

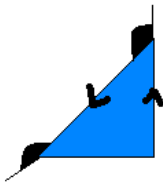


The same thing is true for our other polygons. Each time we turn, we make an angle. That's called a **turn angle** or an **exterior angle**. When we add up all the angles we make going around the figure, we get 360° . Remember, the sum of turn angles is 360° .

Here's how we show the turn angles. First, extend the side that has the arrow and draw the turn angle.



Extend the next side and draw the turn angle.



Finally, extend the last side and draw your final turn angle. Now you can stop.

