**POLYGONS OVERVERVIEW**

Theorem: The sum of the measures of the *interior* angles of a convex polygon with sides is given by the formula

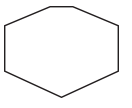
Each interior angle of a regular -gon: Each exterior angle of a regular -gon:

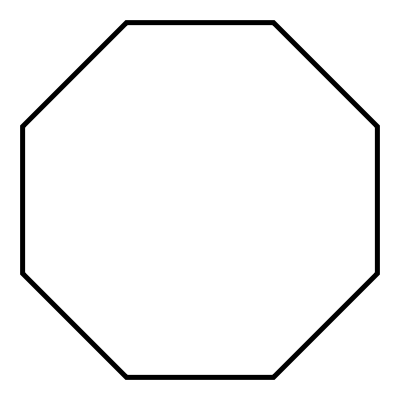
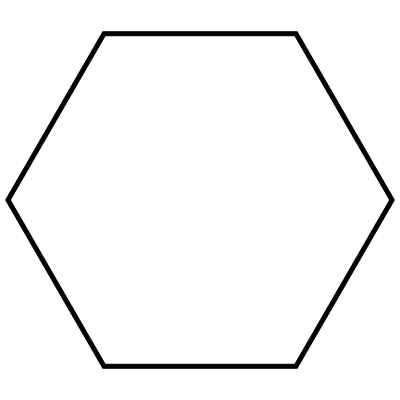
**POLYGONS PRACTICE**

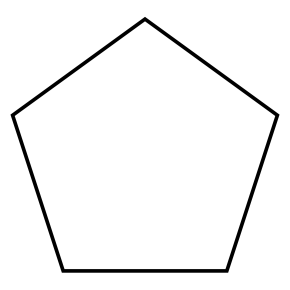
1. A polygon has 102 sides. What is the sum of its interior angles? What is the sum of its exterior angles?

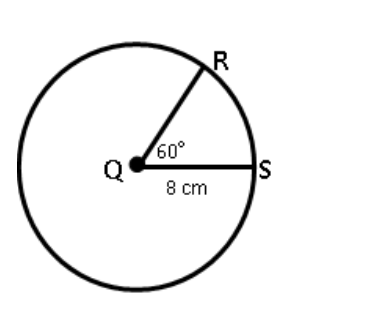
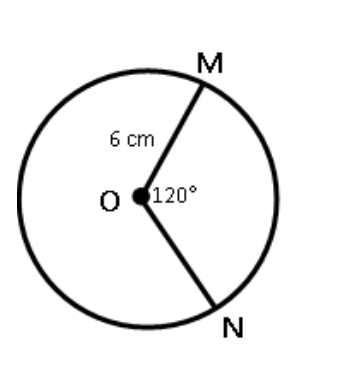
2. If each interior angle of a regular polygon measures 171, determine the number of sides two different ways. Show all your work, including the formula(s) used.

3. Find the sum of the interior angle measures of each polygon.

 a) b) 14-gon c) 20-gon

4. Find the measure of one interior angle in each regular polygon.

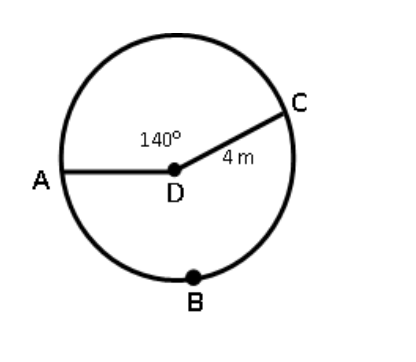


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Length of RS = \_\_\_\_\_\_\_\_\_\_\_\_ Length of MN = \_\_\_\_\_\_\_\_\_\_\_\_



20°

15 in

**E**

**F**

G

Length of ABC = \_\_\_\_\_\_\_\_\_\_\_\_ Length of EF = \_\_\_\_\_\_\_\_\_\_\_\_