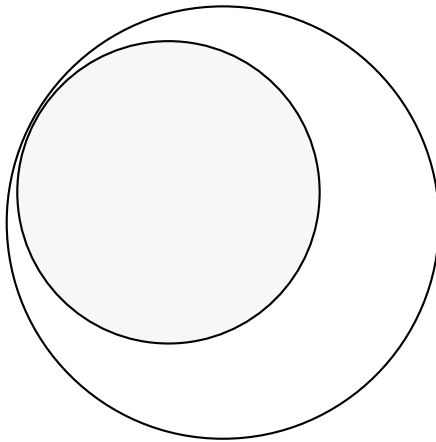# NMU Math & CS Department

Problem of the Month, December 2023

Imagine a circle of radius 10 containing a smaller circle of radius 7 tangent to it.

Now imagine rolling the smaller circle along the circumference of the larger circle for one complete traverse of the circumference of the larger circle (without any sliding or slipping).

Relative to an external observer, what is the total observed rotation of the smaller circle (about its center, measured in degrees)? Explain your work.