## 1.9 Rounding and circle area

1. Write in your notebook the formulas for the area and circumference of circles and these definitions:

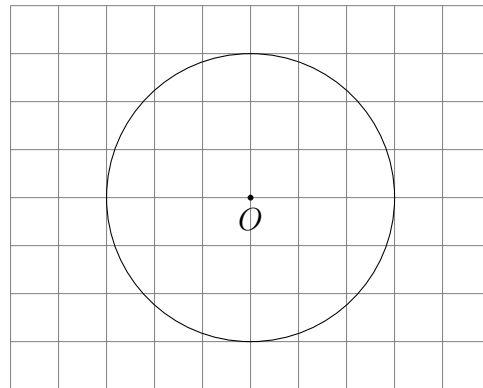   - The radius, $r$, is the distance from the center to the edge of a circle.

   - The diameter, $D$, is the distance all of the way across a circle, two times the radius. $D = 2r$.

   - The circumference, $C$, is the distance around the circle (its perimeter).

   $$A = \pi r^2$$

   $$C = \pi D = 2\pi r$$

2. Given the circle centered at $O$ with radius $r = 3$. Leave an exact answer, in terms of $\pi$ if necessary.
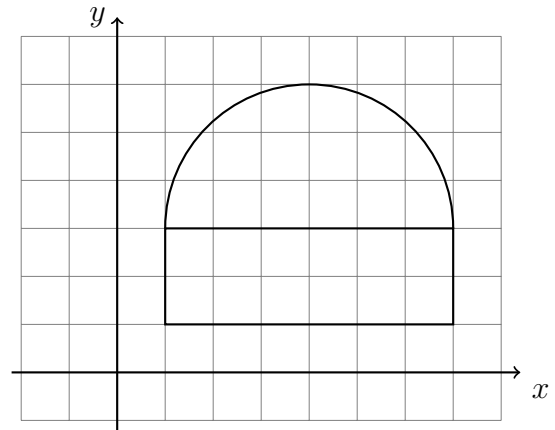
   (a) Find the circumference of circle $O$.

   (b) Find the area of the circle.

3. Find the area $A$ and circumference $C$ of a circle with radius 4 meters (in terms of $\pi$).

4. Find the area $A$ and circumference $C$ of a circle with radius 5 feet (in terms of $\pi$).
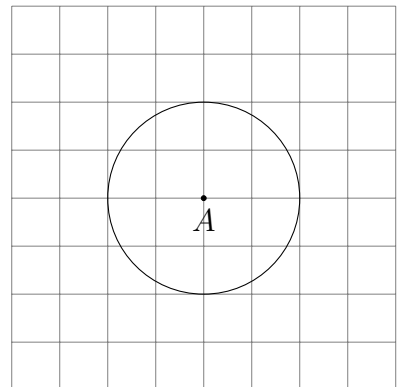
5. Find the area of the shape shown below composed of a rectangle and circular cap. Leave your answer as an exact value in terms of $\pi$.

6. Given the circle centered at $A$ with radius $r = 2$. Leave an exact answer, in terms of $\pi$ if necessary.

   (a) Find the circumference of circle $A$.

   (b) Find the area of the circle.

7. Find the area of the shape shown below composed of a rectangle and circular cap. Leave your answer as an exact value in terms of $\pi$.