22 Sept 2022

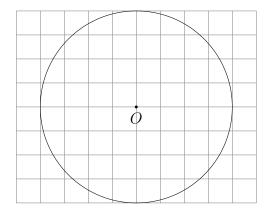
## 1.9 Rounding and circle area

- 1. Write these formulas and definitions in your notebook:
  - 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).

$$A = \pi r^2$$

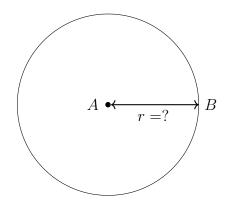
$$C = 2\pi r$$

- 2. Given the circle centered at O with radius r=4. Leave an exact answer, in terms of  $\pi$ .
  - (a) Find the circumference of circle O.



(b) Find the area of the circle.

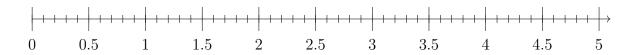
- 3. Find the area A of a circle with radius 13 inches to the nearest square inch.
- 4. Given circle O with area  $A = 64\pi$  square centimeters. Find the radius, AB = r.



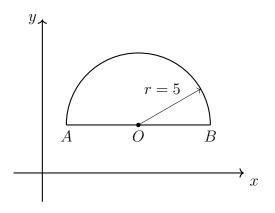
Start with the formula

$$A=\pi r^2=64\pi$$

5. In mathematics we commonly use the special, irrational number,  $\pi = 3.14159265358...$  Mark and label  $\pi$  on the number line below.



6. A semicircle is half of a circle, as shown below. The given semicircle has a radius of r = 5. Round your answers to the *nearest tenth*.



- (a) Find the diameter, D = AB.
- (b) Find the perimeter (the half circumference plus the diameter)
- (c) Find the area of the semicircle.

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

