

Name:

BECA / Dr. Huson / Geometry 02 Area and volume

2.7 PreTest: Area, Perimeter, Volume

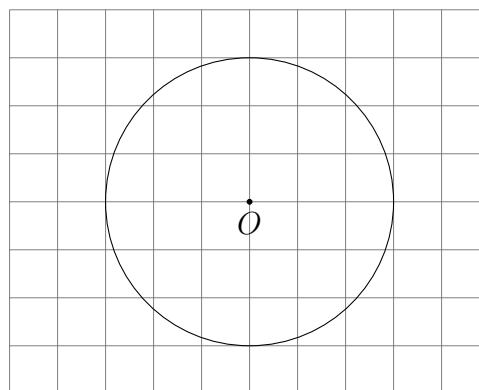
1. Do Now: Find the volume of a rectangular prism with length 5 cm, width 4 cm, and height 3 cm.
2. Write in your notebook the formulas for the area and circumference of circles and these definitions:
 - The radius, r , is the distance from the center to the edge of a circle.
 - The diameter, D , is 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).

$$A = \pi r^2$$

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

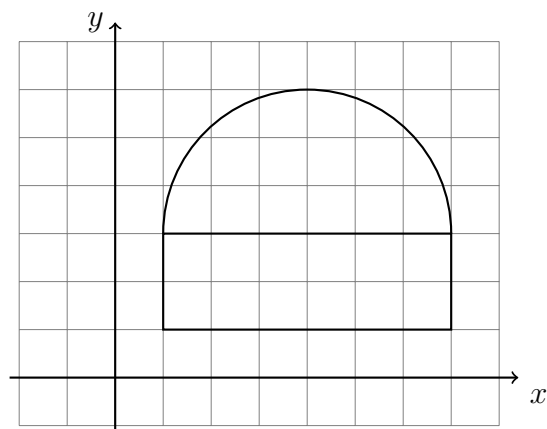
3. Given the circle centered at O with radius $r = 3$. Leave an exact answer, in terms of π if necessary.

(a) Find the circumference of circle O .



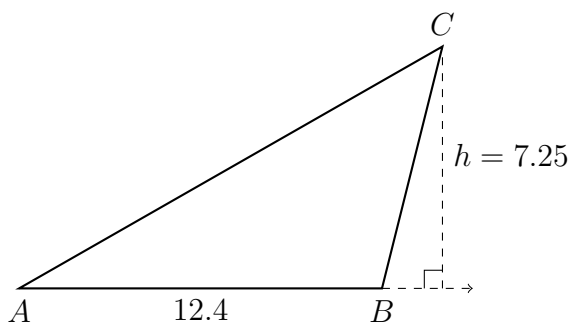
(b) Find the area of the circle.

4. 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 π .



5. Find the volume of a pyramid ($V = \frac{1}{3}Bh$) having a height of 11.3 inches and with a square base having side lengths of 7 inches. Express your result to the *nearest cubic inch*.

6. The side \overline{AB} of triangle ABC is extended and an altitude to the vertex C is drawn, as shown below. The triangle's height is $h = 7.25$ and its base measures $AB = 12.4$. Find the area of the triangle.



7. Find the volume of a sphere with a radius of 30 inches, to the *nearest whole cubic inch*. (The formula for the volume of a *sphere* is $V = \frac{4}{3}\pi r^3$)
8. A rectangle has an area of 44 square inches. Its width is 4 inches. Find its length.
9. A triangle has an area of 75 square centimeters. Its height is 12 centimeters. Find the length of its base.