BECA / Dr. Huson / Geometry 08-Area+volume Name:
pset ID: 131

8-2DN-Estimation

1. Find the area of a semi-circle with radius of 7 centimeters.

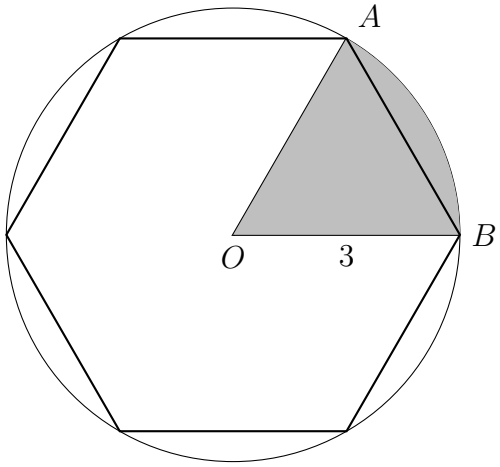
2. Given circle O with radius $OB = 3$ cm.

   (a) Find the circumference of circle O.

   (b) Find the area of the circle.

   (c) A hexagon is inscribed in the circle, with A and B two of its vertices.

   Find the area of the sector AOB.

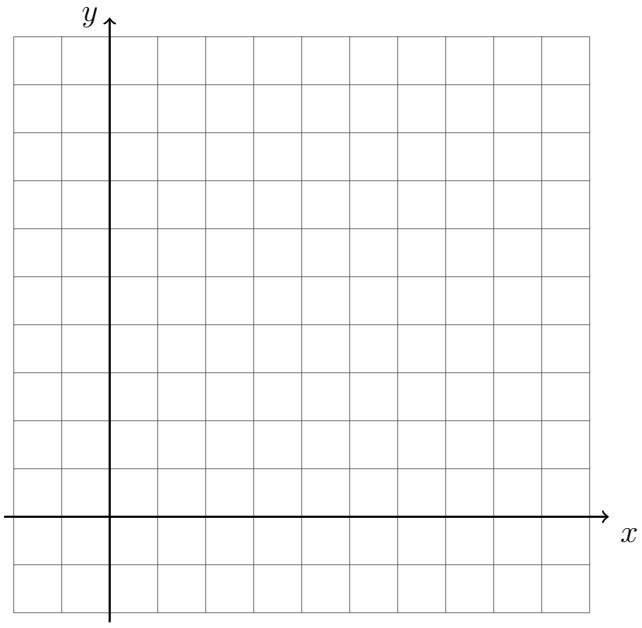


3. Find the volume of a pyramid ($V = \frac{1}{3}Bh$) having a height of 11.3 inches and with a square base having side lengths of 7 inches. Express your result to the *nearest cubic inch*.

4. Find the volume of a hemisphere with a radius of 30 inches, to the *nearest whole cubic inch*. (The formula for the volume of a *sphere* is $V = \frac{4}{3}\pi r^3$)

5. Given $R(-2, 0)$ and $S(3, 5)$, find the length of $\overline{RS}$. Simplify the radical.

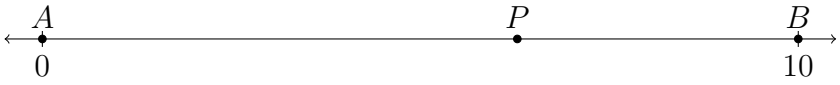
6. On the graph, draw polygon ABCDEF with vertices A(1, 1), B(1, 4), C(3, 4), D(3, 7), E(8, 7), and F(8, 1). Find the perimeter and the area of the polygon.



BECA / Dr. Huson / Geometry 08-Area+volume Name:
pset ID: 131

Estimating and measuring

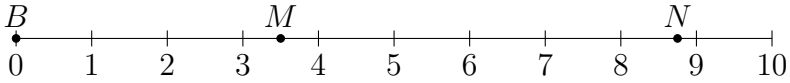
7. The point P falls $A(0)$ and $B(10)$ on the numberline $\overleftrightarrow{AB}$ as shown below.



   (a) Estimate the value of P without using any tools.

   (b) Find the position of P as accurately as you can with a ruler.

8. The distance from B on the line is scaled so that each centimeter represents one foot.



   (a) Estimate the distance of M from B in feet and inches (by eye).

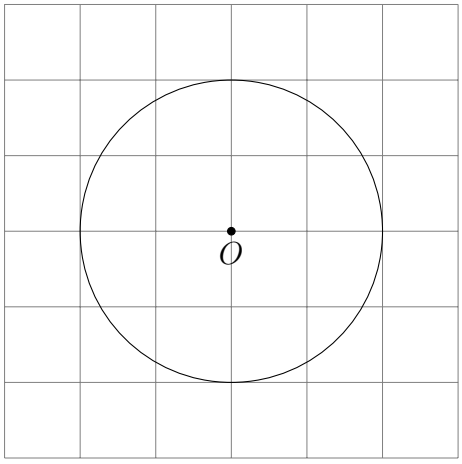
   (b) Using a ruler, find the distance between M and N in feet and inches.

9. Given the circle O with diameter $D = 4$.

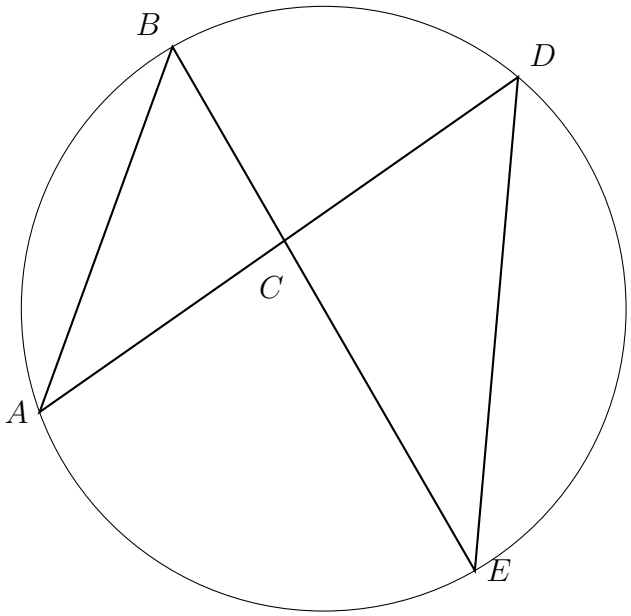
   (a) Estimate the area by counting the squares in the grid.

   (b) Calculate the area.

   (c) Quantify the error in your estimate as a percentage.



10. Given circle O with chords $\overline{AD}$ and $\overline{BE}$ intersecting at C, as shown in the diagram. Use a protractor to measure each angle.



(a) Find the $m\angle A$.

(b) Find the $m\angle B$.

(c) Find the $m\angle D$.

(d) Find the $m\angle E$.

(e) Given that $BE = 8$
Find BC.

(f) Find EC.

11. The diagram below is drawn to scale. Given that $BE = 10$ and $DE = 5$, find AC.