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HW 5-6 HONORS: Distance with Circles

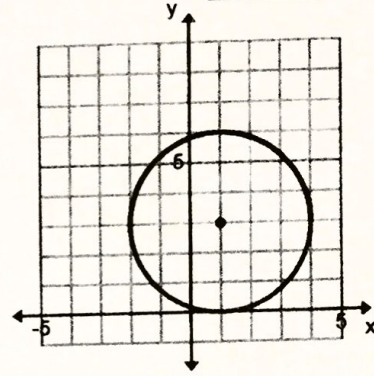
1. Calculate the circumference and area of the circle.

Circumference:

$6\pi \approx 18.85 \text{ u}$

Area:

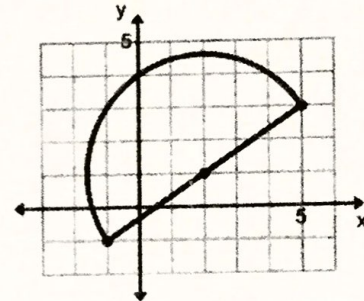
$9\pi \approx 28.27 \text{ u}^2$



2. Calculate the perimeter and area of the figure.

Perimeter:

Area:



3. Given this circle with the center at the origin and a point on the circle at $(8, 0)$. Determine if the points are on the circle. Justify your answer by showing your work.

a. Give the length of the radius.

$r = 8$

b. $(7, 4)$

c. $(-6, -5)$

Not on circle

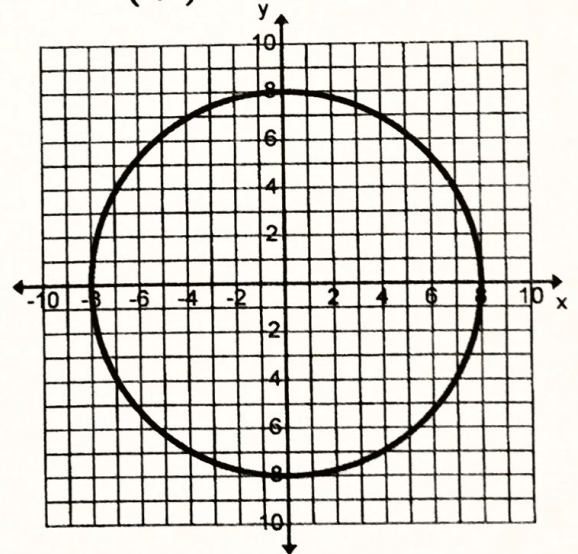
$\sqrt{61} \approx 7.8$

$7.8 \neq 8$

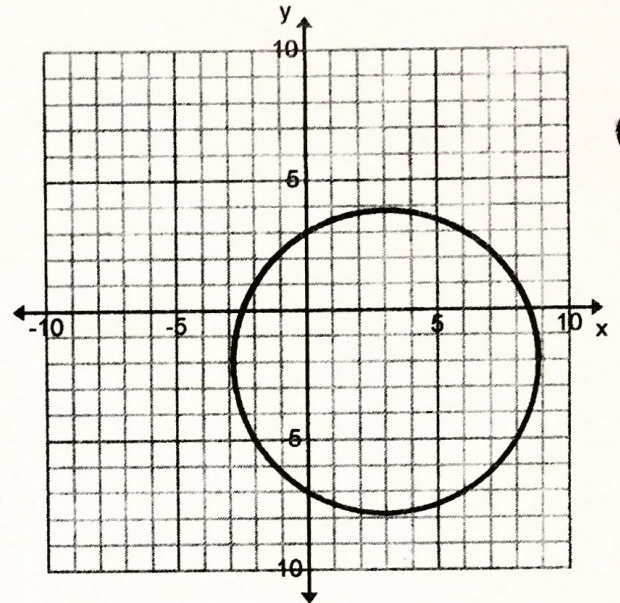
d. Calculate the circumference of the circle.

e. Calculate the area of the circle.

$64\pi \approx 201.06 \text{ u}^2$



4. Given this circle with the center at $(3, -2)$ and a point on the circle at $(6, 3)$. Determine if the points are on the circle. Justify your answer by showing your work.



a. Give the length of the radius.

b. $(-2, -5)$

c. $(-1, 2)$

d. Calculate the circumference of the circle.

e. Calculate the area of the circle.

5. Given a circle with the center at $(0, 1)$ and a point on the circle at $(3, 5)$, determine if the points are on the circle. Justify your answer by showing your work.

a. $(-3, -3)$
on the circle

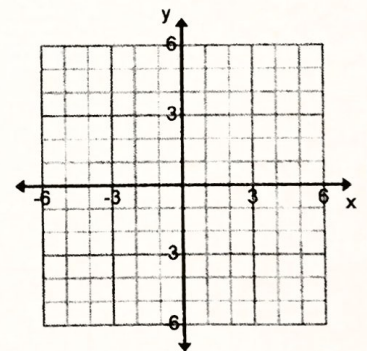
$$\sqrt{25} = 5$$

$$5 = 5$$

b. $(\sqrt{3}, \sqrt{22})$
Not on the circle

$$\sqrt{16.62} \approx 4.08$$

$$4.08 \neq 5$$



6. Given a circle with radius 3 and centered at $(2, 4)$. Determine if the following points are on the circle. Justify your answer by showing your work.

a. $(1, 1)$

b. $(5, 4)$

