## TOPIC 11-2: CIRCUMFERENCE \& AREA OF CIRCLES

| TERM: | DEFINITION: |
| :--- | :--- |
| Circle | The set of points in a plane that are ___ of <br> from a given point, called the |
| Radius | A segment whose endpoints are the___ the circle. <br> the circle and a point ___ circle. |
| Diameter | A segment that passes through the center of the <br> circle and has both endpoints $\quad$ |



EXAMPLE 1: $Q$ is the center of this circle.
a) Name the circle:
b) Name all radii shown:

c) What is the length of any radius of this circle?
d) What would be the length of any diameter of this circle?
e) Name all of the interior points shown: $\qquad$
f) Name all of the exterior points shown:

EXAMPLE 2: Calculate the radius or diameter as indicated.
a) $r=27$ in.; $d=$ $\qquad$
b) $\mathbf{d}=\mathbf{1 2} \mathbf{~ m}$; $r=$ $\qquad$
c) $d=18.6 \mathrm{~cm}$; $\quad \mathrm{r}=$ $\qquad$
Once you know the radius or diameter of a circle, you can calculate its circumference and area. (For calculations, use the $\pi$ button unless told otherwise.)
CIRCUMFERENCE:
AREA:


EXAMPLE 3: Find the circumference and area of $\odot$ T shown below.

$\mathrm{C}=$ $\qquad$
A =
EXAMPLE 4: Find the circumference and area of $\odot$ P below.

$\mathrm{C}=$ $\qquad$

$$
A=
$$

EXAMPLE 5: Find the circumference and area of the circle below.

$C=$ $\qquad$
$\qquad$
A =
EXAMPLE 6: Find the circumference and area of the circle below.

$C=$ $\qquad$

-     -         -             -                 -                     -                         -                             -                                 -                                     -                                         - A=-

EXAMPLE 7: Find the Circumference and area of the circle below.

$\mathrm{C}=$ $\qquad$
A = $\qquad$

