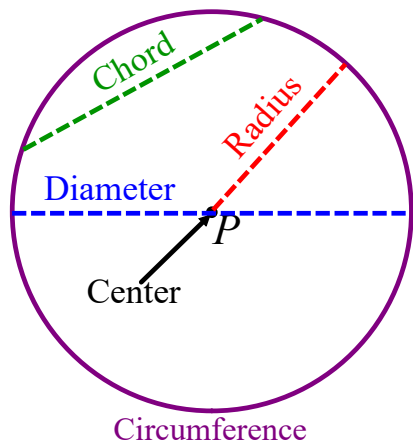


Parts of a Circle



Area Circumference
 $A = \pi r^2$ $C = 2\pi r$

Circles are labeled by the point at the center of the circle.

Circle P or $\odot P$

Radius = Segment connecting the center of the circle to any point on the circle.

Chord = Segment where both endpoints lie on the circle.

Diameter = Chord that passes through the center of the circle and is twice the length of the radius.

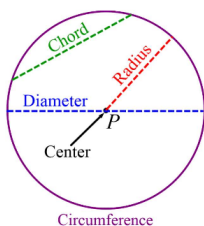
$d = 2r$

Circumference = Perimeter of a circle.

Geometry (E)
Introduction to Circles

Name: _____ Period: _____

Parts of a Circle



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Circle P or $\odot P$

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Circumference = Perimeter of a circle.

Homework Day 1 - ~~4/26/22~~ and this worksheet

Part I - Circumference, Radius, and Diameter

$d = 2r$ $C = 2\pi r$ $C = \pi d$

- If the radius of a circle is 8 cm, what is the circumference?
 $r = 8$ $C = 2\pi r$
 we C = that has r' $C = 2\pi(8) = 50.3 \text{ cm}$
- If the circumference of a circle is 40 mm, what is the radius?
 $C = 40$ $C = 2\pi r$ $r = \frac{40}{(2\pi)} = 6.4 \text{ mm}$
 $40 = 2\pi r$
- If the circumference of a circle is 94.25 inches, what is the radius?
- If the diameter of a circle is 9 cm, what is the circumference?
 $d = 9$ $C = \pi d$
 we C = that has d $C = \pi(9)$
 $C = 28.3 \text{ cm}$
- If the circumference of a circle is 70 cm, what is the diameter?

Part II - Area, Radius, and Diameter

$A = \pi r^2$

6. If the radius of a circle is 4 inches, what is the area?

$r = 4$

$A = \pi (4)^2$ must do exponents before multiplication
 $A = \pi (16)$
 $A = 50.3 \text{ in}^2$ Area is squared units

7. If the area of a circle is 200 in², what is the radius?

$A = 200$

$A = \pi r^2$
 $\frac{200}{\pi} = \pi r^2$

$r^2 = \frac{200}{\pi}$
 $r = \sqrt{\frac{200}{\pi}} = 7.8 \text{ in}$

radius diameter circumference is linear units

8. If the diameter of a circle is 20 cm, what is the area?

$d = 2r$ $d = 20$
 $\frac{20}{2} = \frac{2r}{2}$ $r = 10$

$A = \pi r^2$
 $A = \pi (10)^2$

9. If the area of a circle is 400 mm², what is the diameter?

Part III - Circumference and Area

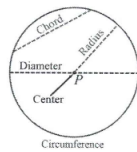
10. If the area of a circle is 100 mm², what is the circumference?

11. If the circumference of a circle is 27 m, what is the area?

Geometry (E)
 Introduction to Circles

Name: LC7 Period: _____

Parts of a Circle



Radius = Segment connecting the center of the circle to any point on the circle.

Chord = Segment whose both endpoints lie on the circle.

Diameter = Chord that passes through the center of the circle and is twice the length of the radius.

Circumference = Perimeter of a circle.

Part I - Circumference, Radius, and Diameter

$d = 2r$ $C = 2\pi r$ $C = \pi d$

If the radius of a circle is 8 cm, what is the circumference?

$C = 2\pi(8)$ $C = 16\pi$ or 50.3

If the circumference of a circle is 40 mm, what is the radius?

$40 = 2\pi r$ $r = \frac{40}{2\pi}$ or 6.4 or $\frac{20}{\pi}$

If the circumference of a circle is 94.25 inches, what is the radius?

$94.25 = 2\pi r$ $r = \frac{94.25}{2\pi}$ or 15.0

If the diameter of a circle is 9 cm, what is the circumference?

$C = \pi(9)$ $C = 9\pi$ or 28.3

If the circumference of a circle is 70 cm, what is the diameter?

$70 = \pi d$ $d = \frac{70}{\pi}$ or 22.3

6. If the radius of a circle is 4,

$A = \pi(4)$

7. If the area of a circle

$200 = \pi$

8. If the diameter of a circle

$r = 10$

9. If the area of a circle

$400 = \pi r^2$

Part III - Circumference

10. If the area of a circle

$100 = \pi r^2$
 $r = \sqrt{\frac{100}{\pi}}$

11. If the circumference

$27 = C$

$r = \frac{C}{2\pi}$

Part II - Area, Radius, and Diameter

$$A = \pi r^2$$

6. If the radius of a circle is 4 inches, what is the area?

$$A = \pi(4)^2 \quad \boxed{A = 16\pi \text{ or } 50.3}$$

7. If the area of a circle is 200 in
- ²
- , what is the radius?

$$200 = \pi r^2 \quad r^2 = \frac{200}{\pi} \quad \boxed{r = \sqrt{\frac{200}{\pi}} \text{ or } 8.0}$$

8. If the diameter of a circle is 20 cm, what is the area?

$$r = 10 \quad A = \pi(10)^2 \quad \boxed{A = 100\pi \text{ or } 314.2}$$

9. If the area of a circle is 400 mm
- ²
- , what is the diameter?

$$400 = \pi r^2 \quad r^2 = \frac{400}{\pi} \quad r = \sqrt{\frac{400}{\pi}} \text{ or } 11.3 \quad \boxed{d = 22}$$

Part III - Circumference and Area

10. If the area of a circle is 100 mm
- ²
- , what is the circumference?

$$100 = \pi r^2 \quad C = 2\pi \sqrt{\frac{100}{\pi}}$$

$$r = \sqrt{\frac{100}{\pi}} \quad \boxed{C = 35.4}$$

11. If the circumference of a circle is 27 m, what is the area?

$$27 = 2\pi r \quad A = \pi \left(\frac{27}{2\pi}\right)^2$$

$$r = \frac{27}{2\pi} \quad \boxed{A = 58.0}$$