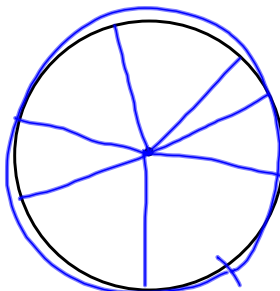


7th Grade Lesson 66

- I can find an approximate value of pi by measuring the circumference and diameter of different circular objects.
- I can use the formula $C = d\pi$ to calculate the circumference of a circle given the length of the diameter or the length of the radius.
- I can represent π , pi, as a fraction and as a decimal.

A circle is a smooth curve and every point on the curve is the same distance from the center.



The distance from the center to the circle is the **radius**.

The distance across a circle through the center is the **diameter**.

The distance around a circle is the **circumference**.

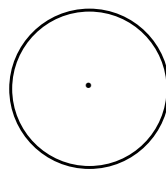
Investigating Circumference and Diameter

Object	Circumference	Diameter	<u>Circumference</u> <u>Diameter</u> (Fraction)	<u>Circumference</u> <u>Diameter</u> (Decimal)

The number of diameters equal to the circle's circumference is a constant (doesn't change). We call this number **Pi** (π).

$$C = d\pi$$

$$C = 2r\pi$$



To perform calculations with π you need to use an approximation.

3.14

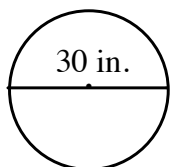
$\frac{22}{7}$

decimal

fraction

The radius of a circle is 10 cm. What is the circumference?

Find the circumference of each circle.

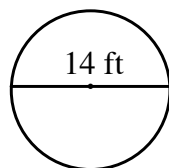


Use 3.14 for π

$$C = d\pi$$

$$C = 30 \cdot 3.14$$

$$C = 94.2 \text{ in.}$$

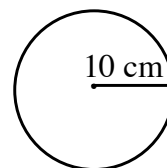


Use $\frac{22}{7}$ for π

$$C = d\pi$$

$$C = \frac{14^2}{1} \cdot \frac{22}{7}$$

$$C = 44 \text{ ft.}$$

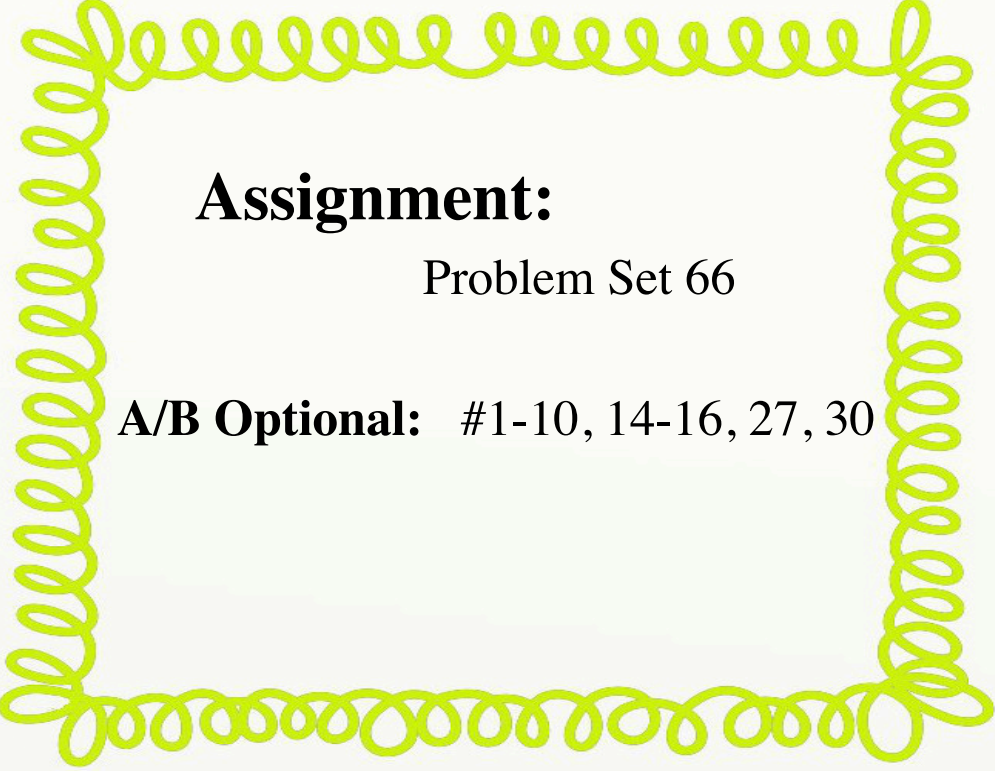


Leave π as π

$$C = 2r\pi$$

$$C = 2 \cdot 10 \cdot \pi$$

$$C = 20\pi \text{ cm}$$



Assignment:
Problem Set 66

A/B Optional: #1-10, 14-16, 27, 30