

3/14
WED

11.5/ Circumference of a Circle

→ distance around a circle (perimeter)

Thm 11.7

$$C = 2\pi r \quad \text{or} \quad C = \pi \cdot d$$

diameter

$$\pi \approx 3.141592635\dots$$

irrational

ex 1) Radius of a circle is 8 feet.
Find the circumference
to the nearest tenth.

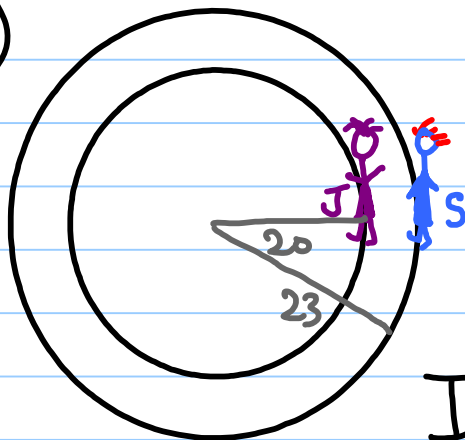
→ ratio of circumference & radius

$$C = 2\pi r = 2\pi(8) \approx 50.3 \text{ ft}$$

ex 2) Diameter of a plastic pipe is 5 cm.
Find the circumference to the nearest cm.

$$C = \pi \cdot d = \pi(5) \approx 16 \text{ cm}$$

ex 3)



Circular garden (r: 20ft)
w/ 3 ft path

Jannette: inside path
Sahara: outside path

In 10 laps, how much further
does Sahara walk...

Jannette

$$C = 2\pi r \\ = 2\pi(20)(10) \\ \approx 1256.6 \text{ ft}$$

Sahara

$$C = 2\pi r \\ = 2\pi(23)(10) \\ \approx 1445.1 \text{ ft} = 188.5 \text{ ft.}$$