4-16-17

Aim: SWBAT find the area of a circle.

HW: Finish WS
Quiz Friday

Do Now: What is the relationship between a circle's radius and a circle's diameter?

Find the exact circumference of a circle with radius 8 cm.

in terms of π

$C = 2\pi r$

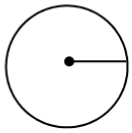
$C = 2 \cdot \pi \cdot 8$

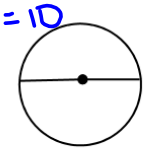
$C = 16\pi$ cm

Circumference of a Circle

Find the circumference of the circle using $C = 2\pi r$. Write your answer four different ways.

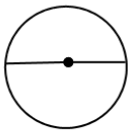
EXACT

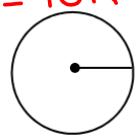
1. A circle with radius 5 cm. 	Answer in terms of π. $C = 2\pi r$ $C = 2 \cdot \pi \cdot 5$ $C = 10\pi$ cm	Answer using the π button. $C = 2\pi r$ $C = 2 \cdot \pi \cdot 5$ $C = 10\pi$ $C = 31.41592\ldots$ cm	Answer rounded to the nearest tenth. $C = 2\pi r$ $C = 2 \cdot \pi \cdot 5$ $C = 10\pi$ $C = 31.41592\ldots$ $C \approx 31.4$ cm	Answer using $\pi \approx 3.14$. $C = 2\pi r$ $C \approx (2)(3.14)(5)$ $C \approx 31.4$ cm

2. A circle with diameter 20 inches. $r = 10$ 	Answer in terms of π. $C = 2\pi r$ $C = 2 \cdot \pi \cdot 10$ $C = 20\pi$ in.	Answer using the π button. $C = 2\pi r$ $C = 2 \cdot \pi \cdot 10$ $C = 20\pi$ in. $C = 62.8318\ldots$	Answer rounded to the nearest tenth. $C = 2\pi r$ $C = 2 \cdot \pi \cdot 10$ $C = 20\pi$ in. $C = 62.8318\ldots$ in. $C \approx 62.8$ in.	Answer using $\pi \approx 3.14$. $C = 2\pi r$ $C \approx 2 \cdot 3.14 \cdot 10$ $C \approx 62.8$ in.

Circumference of a Circle

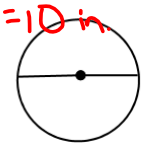
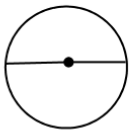
Find the circumference of the circle using $C = \pi d$. Write your answer four different ways.

3. A circle with diameter 7 inches. 	Answer in terms of π.	Answer using the π button.	Answer rounded to the nearest tenth.	Answer using π = 3.14.
	$C = \pi d$ $C = \pi \cdot 7$ $C = 7\pi$ in.	$C = \pi d$ $C = \pi \cdot 7$ $C = 7\pi$ $C = 21.99114858\ldots$ in.	$C = \pi d$ $C = \pi \cdot 7$ $C = 7\pi$ $C = 21.99114858\ldots$ $C \approx 22.0$ in.	$C = \pi d$ $C \approx (3.14)(7)$ $C \approx 21.98$ in.

4. A circle with radius 20 meters. $d = 40$ m 	Answer in terms of π.	Answer using the π button.	Answer rounded to the nearest tenth.	Answer using π = 3.14.
	$C = \pi d$ $C = \pi \cdot 40$ $C = 40\pi$ m	$C = \pi d$ $C = \pi \cdot 40$ $C = 40\pi$ $C = 125.66370\ldots$	$C = \pi d$ $C = \pi \cdot 40$ $C = 40\pi$ $C = 125.66370\ldots$ m $C \approx 125.7$ m	$C = \pi d$ $C \approx (3.14)(40)$ $C \approx 125.6$ m

Finding the Area, the Radius, or the Diameter

Find the area of each circle using $A = \pi r^2$. Write your answer four different ways.

1. A circle with diameter 20 inches.	Answer in terms of π.	Answer using the π button.	Answer rounded to the nearest tenth.	Answer using π ≈ 3.14.
 $r = 10$ in.	$A = \pi r^2$ $A = \pi \cdot 10^2$ $A = 100\pi$ in.^{2}	$A = \pi r^2$ $A = \pi \cdot 10^2$ $A = 100\pi$ $A = 314.15926\ldots$ in.^{2}	$A = \pi r^2$ $A = \pi \cdot 10^2$ $A = 100\pi$ $A = 314.15926\ldots$ in.^{2} $A \approx 314.2$ in.^{2}	$A = \pi r^2$ $A \approx (3.14) \cdot 10^2$ $A \approx 314$ in.^{2}
2. A circle with diameter 7 inches.	Answer in terms of π.	Answer using the π button.	Answer rounded to the nearest tenth.	Answer using π ≈ 3.14.
				
3. A circle with radius 20 meters.	Answer in terms of π.	Answer using the π button.	Answer rounded to the nearest tenth.	Answer using π ≈ 3.14.