

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

$$C = 2\pi r$$

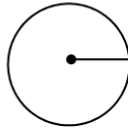
$$C = 2 \cdot \pi \cdot 8$$

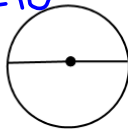
$$C = 16\pi \text{ cm}$$

Circumference of a Circle

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

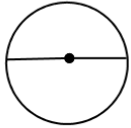
EXACT

<p>1. A circle with radius 5 cm.</p> 	<p>Answer in terms of π.</p> $C = 2\pi r$ $C = 2 \cdot \pi \cdot 5$ $C = 10\pi \text{ cm}$	<p>Answer using the π button.</p> $C = 2\pi r$ $C = 2 \cdot \pi \cdot 5$ $C = 10\pi$ $C = 31.41592 \dots \text{ cm}$	<p>Answer rounded to the nearest tenth.</p> $C = 2\pi r$ $C = 2 \cdot \pi \cdot 5$ $C = 10\pi$ $C = 31.41592 \dots$ $C \approx 31.4 \text{ cm}$	<p>Answer using $\pi \approx 3.14$.</p> $C = 2\pi r$ $C \approx (2)(3.14)(5)$ $C \approx 31.4 \text{ cm}$
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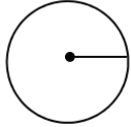
<p>2. A circle with diameter 20 inches.</p> <p>$r = 10$</p> 	<p>Answer in terms of π.</p> $C = 2\pi r$ $C = 2 \cdot \pi \cdot 10$ $C = 20\pi \text{ in.}$	<p>Answer using the π button.</p> $C = 2\pi r$ $C = 2 \cdot \pi \cdot 10$ $C = 20\pi \text{ in.}$ $C = 62.83185 \dots \text{ in.}$	<p>Answer rounded to the nearest tenth.</p> $C = 2\pi r$ $C = 2 \cdot \pi \cdot 10$ $C = 20\pi \text{ in.}$ $C = 62.83185 \dots \text{ in.}$ $C \approx 62.8 \text{ in.}$	<p>Answer using $\pi \approx 3.14$.</p> $C = 2\pi r$ $C \approx 2 \cdot 3.14 \cdot 10$ $C \approx 62.8 \text{ in.}$
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Circumference of a Circle

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

<p>3. A circle with diameter 7 inches.</p> 	<p>Answer in terms of π.</p> $C = \pi d$ $C = \pi \cdot 7$ $C = 7\pi \text{ in.}$	<p>Answer using the π button.</p> $C = \pi d$ $C = \pi \cdot 7$ $C = 7\pi$ $C = 21.99114858$	<p>Answer rounded to the nearest tenth.</p> $C = \pi d$ $C = \pi \cdot 7$ $C = 7\pi$ $C = 21.9914858$	<p>Answer using $\pi = 3.14$.</p> $C = \pi d$ $C \approx (3.14)(7)$ $C \approx 21.98 \text{ in.}$
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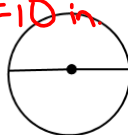
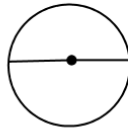
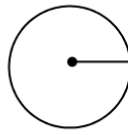
$C \approx 22.0 \text{ in.}$

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

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.

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