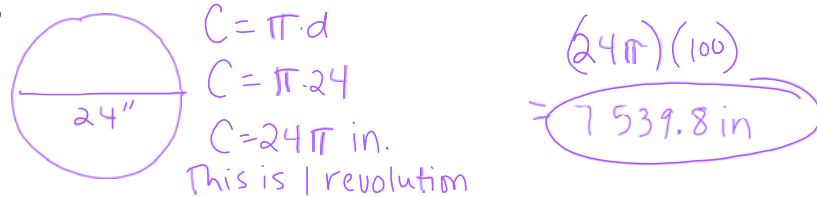
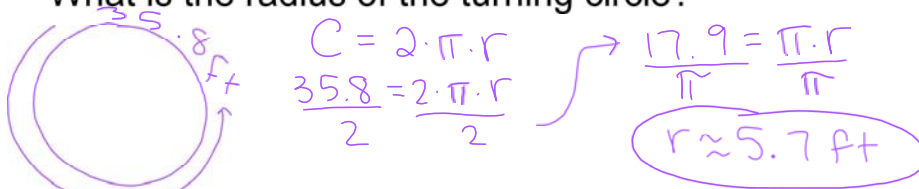


Notes for page 1.08

Ex. 1: If a bicycle wheel has a diameter of 24 inches, how far has the bike traveled when the wheel has completed 100 revolutions?



Ex. 2: A turning circle of a 2010 Volkswagen Beetle is 35.8 feet. What is the radius of the turning circle?

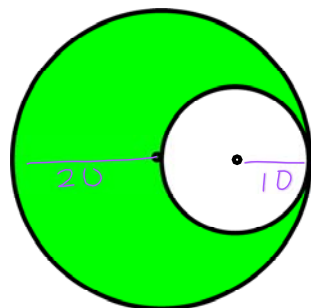


~~Ex. 3: A satellite traveling in a circular orbit 300 km above the earth completes an orbit in 90 minutes. If the radius of the earth is about 6370 km, how fast is the satellite traveling?~~

Notes for page 1.08 continued

Find the area of the shaded regions.

Ex. 1:

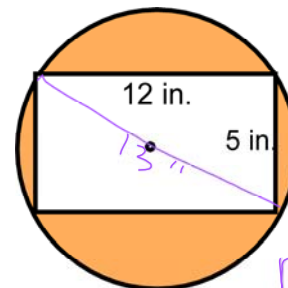


40 ft

$$\begin{aligned}
 A &= A_{L0} - A_{S0} \\
 A &= \pi r^2 - \pi r^2 \\
 A &= \pi \cdot 20^2 - \pi \cdot 10^2 \\
 A &= 400\pi - 100\pi \\
 A &= 300\pi
 \end{aligned}$$

$$A \approx 942.5 \text{ ft}^2$$

Ex. 2:



$$\begin{aligned}
 5^2 + 12^2 &= c^2 \\
 25 + 144 &= c^2 \\
 169 &= c^2 \\
 13 &= c \\
 r &= 6.5''
 \end{aligned}$$

$$\begin{aligned}
 A &= A_{\circ} - A_{\square} \\
 &= \pi r^2 - b \cdot h \\
 &= \pi (6.5)^2 - 12 \cdot 5 \\
 &= 422.5\pi - 60
 \end{aligned}$$

$$A \approx 72.7 \text{ in}^2$$