Lesson 12-3 → Calculating Area When Given Circumference

Circumference = πd

Area = πr^2

$\pi \approx 3.14$

This lesson is all about using algebra to work **backwards** from circumference to find diameter then radius

A circle's circumference is 43.96 inches. What is its area? Use 3.14 for pi. Round to tenth.

$C = \pi d$

$$\frac{43.96}{3.14} = \frac{3.14d}{3.14}$$

← divide **both** sides by 3.14!

$14 = d$ so... $r = 7$ ⊘ $d=14$ ⊙ $r=7$

$A = \pi r^2$

$A = 3.14 \times 7^2$
$A = 3.14 \times 7 \times 7$

153.86 sq. in. which rounds to 153.9 sq. in.