Sections 4.2-4.4

Solve: $\sin(\theta) = 0.4$.

Ask: "On what interval?"

That is: "On what interval of values for θ?"

• 1) Solve $\sin(\theta) = 0.4$ on $\left(0, \frac{\pi}{2}\right)$.
That is, find **the** acute solution (value for θ).

Solution set = {about 0.412}

• 2) Solve $\sin(\theta) = 0.4$ on $[0, 2\pi)$.
That is, find the solutions around "one classic revolution" around the unit circle.

Solution set = {about 0.412, about 2.730}

LATER: Section 5.3

• 3) Solve $\sin(\theta) = 0.4$ on $\mathbb{R}$.
That is, find **all real** solutions.

Solution set =
$\{\theta \epsilon \mathbb{R} | \theta \approx 0.412 + 2\pi n$ **or** $\theta \approx 2.730 + 2\pi n \ (n \epsilon \mathbb{Z})\}$