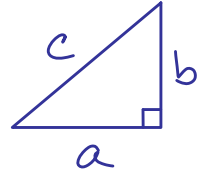


Calculus C - Warmup - 7.3

Pythagorean Theorem: $a^2 + b^2 = c^2$

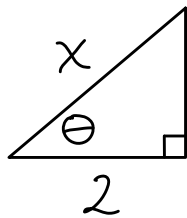


Given $\sqrt{a^2 \pm u^2}$ set up a right triangle illustrating the pythagorean relationship and write x in terms of θ . Hint: If x is not the hypotenuse, put it opposite θ .

Don't forget: Soh Cah Toa

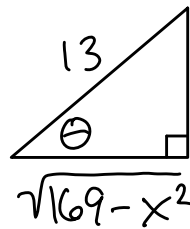
↳ $\csc = \frac{h}{o}$ ↳ $\sec = \frac{h}{a}$ ↳ $\cot = \frac{a}{o}$

Example: $\sqrt{x^2 - 4}$



$$\frac{x}{2} = \sec \theta$$
$$x = 2 \sec \theta$$

Example: $\sqrt{169 - x^2}$



$$\frac{x}{13} = \sin \theta$$

$$x = 13 \sin \theta$$

① $\sqrt{x^2 - 36}$

② $\sqrt{16 + x^2}$

③ $\sqrt{4x^2 + 25}$

④ $\sqrt{1 - x^2}$

⑤ $\sqrt{9x^2 - 3}$

⑥ $\sqrt{5 - e^{2x}}$