

Vocabulary/Definitions

- What is the derivative of $\sin(x)$ at $x = 0$? (How does the book find this?)
- What is $\frac{d}{dx}(\sin(x))$?
- What is $\frac{d}{dx}(\cos(x))$?
- What is $\frac{d}{dx}(\tan(x))$? (How does the book find this?)

Understand

1. Find the derivatives of each of: $f(x) = \sin(7x)$, $g(t) = \cos(\sin(t))$, and $h(z) = \frac{1}{\tan(z)}$.

2. Find the second derivative of $f(x) = \tan(x)$. Where does it have vertical asymptotes?