1. Suppose $f(x) = \sqrt{x} \tan(x)$. Find f'(x).

2. Suppose
$$y = \frac{\cos(x)}{x}$$
. Find $\frac{dy}{dx}$.

3. Suppose
$$y = \frac{1+x^2}{x\sin(x)}$$
. Find y' .

4. A function f(x) is graphed below. Suppose $g(x) = x^3 f(x)$. Find g'(-5).

