

### Differentiation - Chain Rule - Trig functions

Find  $f'(x)$ .

1.  $f(x) = \sin(x^3)$

2.  $f(x) = \cos(x^2 + 1)$

3.  $f(x) = \sec(5x)$

4.  $f(x) = \tan(\sqrt{x})$

5.  $f(x) = \sin(3e^x + 1)$

6.  $f(x) = \cos\left(\frac{1}{x}\right)$

7.  $f(x) = \sec(x\sqrt{x})$

8.  $f(x) = \tan(3x^2)$

9.  $f(x) = \csc(x^4)$

10.  $f(x) = \cot(2x+3)$