

Find the following derivatives. Show your work, (wherever reasonable).

$$1) \frac{d}{dx} \left[5x^3 - 2x^4 + \frac{2}{x^2} + 3\sqrt{x} + 1 \right] =$$

$$2) \frac{d}{dt} \left[2 \cdot 4^t - 0.2 e^t - \ln(t) \right] =$$

$$3) \frac{d}{dx} \left[3 \sin x - 0.5 \cos x - x \right] =$$

$$4) \frac{d}{dx} \left[\sin(x^2 - x) \right] =$$

$$5) \frac{d}{dt} \left[\ln(2e^t + 1) \right] =$$

$$6) \frac{d}{dt} \left[e^{-0.05t} \right] =$$