## Math 2300–013: Chain Rule Practice

Compute the following derivatives using the chain rule:

$$\bullet \ \frac{d}{dx} \left( 3 - x^5 \right)^4 =$$

$$\bullet \ \frac{d}{dx} e^{5x^2+1} =$$

• 
$$\frac{d}{dx}\sqrt{\csc(x)} =$$

• 
$$\frac{d}{dx}\sin\left(\sqrt{e^x}\right) =$$

$$\bullet \ \frac{d}{dx} \left( \frac{x^2 - 1}{3x + 2} \right)^3 =$$