

1 Differentiation

Differentiate the following equations:

$$8e^{\ln(x)} - 1 \quad (1)$$

$$9 \tan(\tan(x)) - 6 \quad (2)$$

$$\ln(e^{e^x}) \quad (3)$$

$$e^{\sin(\cos(x))} \quad (4)$$

$$\ln\left(\frac{1}{\sin(x)}\right) \quad (5)$$

$$\tan\left(\frac{1}{\sin(x)}\right) \quad (6)$$

$$5 - 7e^{\tan(x)} \quad (7)$$

$$e^{\tan(4x-5)} \quad (8)$$

$$\sin(\tan(\tan(x))) \quad (9)$$

$$-20 \cos(x) - 2 \quad (10)$$

$$\sin(9x - 6) + 5 \quad (11)$$

$$\cos\left(\cos\left(\frac{1}{x}\right)\right) \quad (12)$$

$$\sin(\ln(3 - 2x)) \quad (13)$$

$$\tan\left(\frac{1}{\ln(x)}\right) \quad (14)$$

$$\sin(\cos(e^x)) \quad (15)$$

$$\cot(\sin(\sec(x))) \quad (16)$$

$$\sec(\sin(\ln(x))) \quad (17)$$

$$\ln(\ln(e^x)) \quad (18)$$

$$\ln(-\sin(3x - 8)) \quad (19)$$

$$\cos(\tan(4x - 4)) \quad (20)$$