

32 Using the Sum Rule, Multiple Rule, and Power Rule,

$$d(2x^3 + 5y - 2) = d(2x^3) + d(5y) = 2 d(x^3) + 5 dy = 2(3x^2 dx) + 5 dy = 6x^2 dx + 5 dy.$$

45 Using the Power Rule twice,

$$d((x^4 + 1)^{-2}) = -2(x^4 + 1)^{-3} d(x^4 + 1) = -2(x^4 + 1)^{-3} (4x^3 dx) = -8x^3(x^4 + 1)^{-3} dx.$$