Exponential Functions

differentiate with respect to x :

1.
$$y = e^{3x}$$

2.
$$y = e^{x^3}$$

3.
$$y = e^{\cos(x)}$$

4.
$$y = 3e^{2x}$$

5.
$$y = e^{2x^2}$$

6.
$$y = 5e^{3x^2}$$

7.
$$y = 2e^{4x^2-1}$$

8.
$$y = 3e^{2-x^2}$$

9.
$$y = 3e^{\sqrt{x}}$$

10.
$$y = 3e^{2x} - 2e^{x^2}$$

Exponential Functions

answers:

1.
$$3e^{3x}$$

2.
$$2xe^{x^2}$$

3.
$$-e^{\cos(x)}\sin(x)$$

4.
$$6e^{2x}$$

5.
$$4xe^{2x^2}$$

6.
$$30xe^{3x^2}$$

7.
$$16xe^{4x^2-1}$$

8.
$$-6xe^{2-x^2}$$

9.
$$1.5x^{-\frac{1}{2}}e^{x^{\frac{1}{2}}}$$

10.
$$6e^{2x}-4e^{x^2}$$