Name: _____

Find the derivatives of the following functions, using the chain rule.

1. $f(x) = \cos(x^3)$

2. $f(x) = 5^{\sqrt{x}}$

3. $f(x) = \sin((2x+3)^4)$

Name: _____

Find the derivatives of the following functions, using the chain rule.

1. $f(x) = (x^3 + 5x + 1)^4$

2. $f(x) = \cos(3^x)$

3. $f(x) = \sqrt{\ln(x^2)}$

Name: _____

Find the derivatives of the following functions, using the chain rule.

1. $f(x) = \sin(\sqrt{x})$

2. $f(x) = \ln(x^2 + 3)$

3. $f(x) = 3^{\cos(x^2)+2}$

Name: _____

Find the derivatives of the following functions, using the chain rule.

1. $f(x) = \ln(x^4)$

2. $f(x) = \sqrt[3]{x^4 + 3x^2 + 5}$

3. $f(x) = \sin(e^{x^2+1})$