- 1. Let $f(x) = \ln(x)$, $g(x) = x^2 + 3x$, and $h(x) = \cos(x)$. Find the following derivatives.
 - (a) $(f \circ g)'(x)$
 - (b) $(g \circ f)'(x)$
 - (c) $(h \circ g)'(x)$
- 2. Find the derivatives of the following functions.
 - (a) $(3x^2+2)^{14}$
 - (b) $\ln(\sin x)$
 - (c) $(\sin(3x^2))^2$
 - (d) $x^2 \sin(x^3)$
 - (e) $\sqrt{\ln(x^2+2x)}$