

Name _____

- You have 15 minutes
- No calculators
- Show sufficient work

1. (4 points) Given $g(t) = \cos(t^5)$, find its second derivative $g''(t)$.

2. (2 points each) Compute $\frac{dy}{dx}$ given each of the following equations.

(a) $y = \sqrt{\arcsin(e^{-5x})}$

(b) $y = (x^2 + 9)^{3 \ln x}$

(c) $xy^3 + x^5y = 42$