This test totals 25 points and you get 20 minutes to do it. Good luck!

1. (1 pt) Write the formula for the chain rule
   \[(f \circ g)'(x) = \text{__________________________________________________________}\]

2. Find \(h'(x)\) using the rules. If you don’t write the steps down, you will not get partial credit.
   (a) (5 pts) \(h(x) = \sin(\cos x)\)
(b) (5 pts) \( h(x) = \sqrt{\sin x \cos x} \)

(c) (5 pts) \( h(x) = \sin^{10}(\pi x - 6) \)
3. Find the following limits.

(a) (1 pt) \( \lim_{h \to 0} \frac{\sin h}{h} = \)

(b) (2 pts) \( \lim_{x \to 0} \frac{\sin(10x)}{x} = \)

(c) (1 pt) \( \lim_{x \to 0} \frac{\sin x}{2x} = \)