Circuit – Chain Rule Name:_____

Directions: Begin in cell #1. Take the derivative. Search for your answer. Continue in this manner until you complete the circuit.

Answer: $2x\sec(x^2+7)\tan(x^2+7)$ # 1 $f(x)=(x^2+7)^5$	Answer: $2x\cos(x^2+7)$ #_____ $f(x)=(x^2+7)^{3/2}$
Answer: $\frac{4x^2+14}{\sqrt{x^2+7}}$ #_____ $f(x)=\tan^2(3x^2)$	Answer: $10x(x^2+7)^4$ #_____ $f(x)=5\sqrt{x^2+7}$

Answer: $4x\sin(x^2)\cos(x^2)$

#_____ $g(x) = 2x\sqrt{x^2+7}$

Answer: $\frac{5x}{\sqrt{x^2+7}}$

#_____ $g(x) = \sin(x^2+7)$

Answer: $3x\sqrt{x^2+7}$

#_____ $y = \sin^2(x^2)$

Answer: $12x\tan(3x^2)\sec^2(3x^2)$

#_____ $h(x) = \sec(x^2+7)$