

Chain Rule Circuit

Name:

Block:

Seat:

Directions: Begin at any cell and write it #1. Take the derivative. Search for your answer. When you find it, mark it #2. Continue in this manner until you complete the circuit. Additional paper may be necessary! No technology is needed!

Answer: $36(3x - 7)^{11}$

_____: $\sin(5x + 2)$

Answer: $\frac{\cos(\ln x)}{x}$

_____: e^{2-3x}

Answer: $10(6x + 5)^{2/3}$

_____ : $\ln(\sin x)$

Answer: $5 \cos(5x + 2)$

_____ : $\sin(\ln x)$

Answer: $4 \sin(1 - 4x)$

_____ : $\sqrt{5x - 3}$

Answer: $e^{-x} \sin(e^{-x})$

_____: $\sec x$ aka $(\cos x)^{-1}$

Answer: $\frac{5}{2\sqrt{5x-3}}$

_____ : $\sqrt{1+x^2}$

Answer: $\frac{\cos x}{\sin x}$ or $\cot x$

_____ : $\cos(e^{-x})$

Answer: $\frac{x}{\sqrt{1+x^2}}$

_____ : $(6x + 5)^{5/3}$

Answer: $-3e^{2-3x}$

_____: $\cos(1 - 4x)$

Answer: $\frac{\sin x}{\cos^2 x}$ or $\tan x \sec x$

_____: $(3x - 7)^{12}$