1. Find $\frac{dy}{dx}$ when $x = 1$ given $y = 2u$ and $u = \sqrt{3x+5}$.

a) $2\sqrt{2}$ b) $4\sqrt{2}$ c) $\frac{3\sqrt{2}}{5}$

d) $\frac{3\sqrt{2}}{4}$ e) $\frac{5\sqrt{2}}{4}$

2. If $x = \frac{\pi}{4}$ given $y = 4\sqrt{u}$ and $u = \sin 2x$, then $\frac{dy}{dx}$ is

a) $\frac{\pi}{4}$ b) 2 c) 0 d) $\frac{3\pi}{2}$ e) π

3. Find the slope of the tangent line to the graph of $y = \ln x^2$ at the point where $x = e^2$.

a) $\frac{2}{e^2}$ b) $\frac{4}{e^2}$ c) $\frac{1}{e^2}$ d) $\frac{1}{e^4}$ e) $\frac{2}{e^4}$

4. On the graph of $y = \ln(2xe^{2x})$, find the slope of the tangent line at the point where $x = 2$.

a) $\ln 4 + 4$ b) $e^4 + \ln 4$ c) $\frac{5}{2}$

d) $\frac{2}{5}$ e) $e^4(1+e)$

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1.
Answer: d
CodePath: EAS.APC.E.F.51

2.
Answer: c
CodePath: EAS.APC.E.F.53

3.
Answer: a
CodePath: EAS.APC.E.C.51

4.
Answer: c
CodePath: EAS.APC.E.C.50