D-AD5

1. Find $\frac{d y}{d x}$ for $4 x+2 x^{2} y=2 y^{2}$
2. (Show all work) If $x+2 x y-y^{2}=2$, then at the point ( 1,1 ) $\frac{d y}{d x}$ is
(A) $\frac{3}{2}$
(B) $\frac{1}{2}$
(C) 0
(D) $-\frac{3}{2}$
(E) nonexistent

D-AD4
Find the derivative of the functions below. Simplify your answers.
3. $y=\log _{5} \cos (2 x)$
4. $f(x)=2 e^{\ln (4 x)}$
5. $y=x^{2} e^{2 x}$

