

ID Check _____

Time Started _____

Name _____

Section/Professor _____

MAT 136: CALCULUS I
GATEWAY EXAM - VERSION D
Full Pass requires 7 or 8 problems; Half Pass 5 or 6. No partial credit
NO CALCULATOR OR SCRATCH PAPER
BOX FINAL ANSWERS

In each case, find the derivative of the given function. It is not necessary to simplify the result algebraically.

1. $f(x) = \frac{x^2 - 3x + 2}{x^2 + 2}$

2. $f(x) = e^{\cos(x)} \cos(x)$

3. $g(x) = \ln(\tan(x))$

4. $f(t) = \frac{t^{3/2} - t + t^{1/2}}{\sqrt{t^3}}$

5. $f(x) = \sin(\ln(x^2 + 1))$

6. $f(x) = \arctan(x^2)$

7. $g(t) = e^{e^{t^2}} = e^{e^{t^2}}$

8. $f(t) = 4^t \cos(4t)$