Name: _____

Quiz 8 ♡

MATH 200
February 10, 2026

1. Suppose $f(x) = \sin(x) + \cot(x)$. Find $f'(x)$.

2. Suppose $y = \left(x^5 - 4x\right) e^x$. Find $\dfrac{dy}{dx}$.

3. Suppose $y = \dfrac{1}{1 + \tan(x)}$. Find y'.

4. Information about functions f and g and their derivatives are given in the table below.
   Suppose $h(x) = x^2 f(x) + g(x)$. Find $h'(2)$.

x	1	2	3	4	5	6
$f(x)$	-3	-2	1	5	6	3
$f'(x)$	5	3	2	1	0	-2
$g(x)$	0	1	-2	3	-4	5
$g'(x)$	2	-3	5	-8	10	-15

Name: _____

Quiz 8 ♣

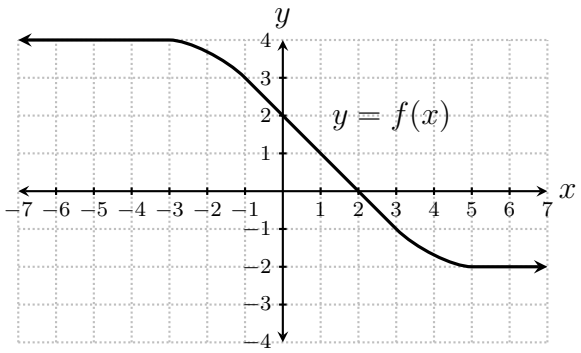
MATH 200
February 10, 2026

1. Suppose $f(x) = x^3 \tan(x)$. Find $f'(x)$.

2. Suppose $y = \dfrac{x^2 - 5x + 4}{x^2 - 24}$. Find $\dfrac{dy}{dx}$.

3. Suppose $y = \dfrac{1 + xe^x}{\sin(x)}$. Find y'.

4. A function $f(x)$ is graphed below. Suppose $g(x) = f(x) \cdot e^x$. Find $g'(1)$.



Name: _____

Quiz 8 ♢

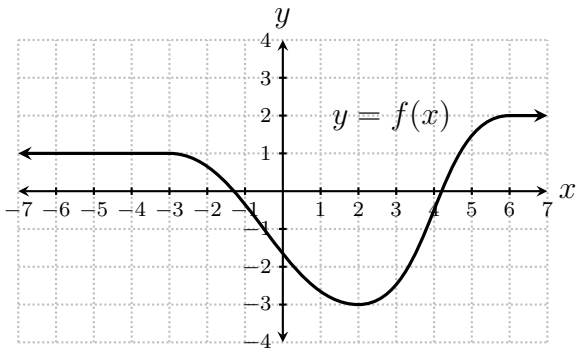
MATH 200
February 10, 2026

1. Suppose $f(x) = e^x\sqrt{x}$. Find $f'(x)$.

2. Suppose $y = \dfrac{3x^2+2}{x-1}$. Find $\dfrac{dy}{dx}$.

3. Suppose $y = \dfrac{x^2+1}{x\cos(x)}$. Find y'.

4. A function $f(x)$ is graphed below. Suppose $g(x) = \dfrac{f(x)}{2x+1}$. Find $g'(2)$.



Name: _____

Quiz 8 ♠

MATH 200
February 10, 2026

1. Suppose $f(x) = \sec(x) + \tan(x)$. Find $f'(x)$.

2. Suppose $y = x^3 \cos(x)$. Find $\dfrac{dy}{dx}$.

3. Suppose $y = \dfrac{1}{x^2 e^x}$. Find y'.

4. Information about functions f and g and their derivatives are given in the table below.

   Suppose $h(x) = \dfrac{f(x)}{x + g(x)}$. Find $h'(2)$.

x	1	2	3	4	5	6
$f(x)$	-3	-2	1	5	6	3
$f'(x)$	5	3	2	1	0	-2
$g(x)$	0	1	-2	3	-4	5
$g'(x)$	2	-3	5	-8	10	-15