

Name: \_\_\_\_\_

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

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

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

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

Suppose  $h(x) = x^2f(x) + g(x)$ . 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: \_\_\_\_\_

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

2. Suppose  $y = (e^x + 1)(x^2 - 5x + 4)$ . Find  $\frac{dy}{dx}$ .

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

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

Suppose  $h(x) = \frac{1 + f(x)}{g(x)}$ . 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: \_\_\_\_\_

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

2. Suppose  $y = \sin(x)(3x^2 + 2)$ . Find  $\frac{dy}{dx}$ .

3. Suppose  $y = \frac{x + \tan(x)}{x^5 + 1}$ . Find  $y'$ .

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

Suppose  $h(x) = \frac{f(x)}{5g(x)}$ . Find  $h'(3)$ .

$x$	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: \_\_\_\_\_

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

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

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

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

Suppose  $h(x) = \frac{f(x)}{x + g(x)}$ . 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