

Practice 08

Differentiate.

1) Find $f'(t)$ for $f(x) = (3x - 4)(4x^3 - x^2 + 1)$

A) $f'(x) = 48x^3 - 57x^2 + 8x + 3$

C) $f'(x) = 48x^3 - 19x^2 + 57x + 3$

B) $f'(x) = 36x^3 + 57x^2 - 19x + 3$

D) $f'(x) = 12x^3 + 19x^2 - 57x + 3$

1) _____

2) Find $f'(x)$ for $f(x) = (5x^3 + 4)(3x^7 - 5)$.

A) $f'(x) = 150x^9 + 84x^6 - 75x$

C) $f'(x) = 150x^9 + 84x^6 - 75x^2$

B) $f'(x) = 20x^9 + 84x^6 - 75x$

D) $f'(x) = 20x^9 + 84x^6 - 75x^2$

2) _____

3) Find $f'(t)$ if $f(t) = 0.4t(5t^2 + 1)$ and simplify.

A) $f'(t) = 6t^2 + 40$

B) $f'(t) = 6t^2 + 4$

C) $f'(t) = 6t^2 - 0.4$

D) $f'(t) = 6t^2 + 0.4$

3) _____

4) Find $f'(t)$ for $f(x) = \frac{x}{4x - 6}$

A) $-\frac{6x}{(4x - 6)^2}$

B) $\frac{8x - 6}{(4x - 6)^2}$

C) $-\frac{6}{(4x - 6)^2}$

D) $-\frac{6}{4x - 6}$

4) _____

5) Find $f'(t)$ for $f(x) = \frac{2x - 7}{3x - 2}$.

A) $-\frac{17}{(2x - 7)^2}$

B) $-\frac{17}{(3x - 2)^2}$

C) $\frac{17}{(2x - 7)^2}$

D) $\frac{17}{(3x - 2)^2}$

5) _____

6) Find y' for $y = \frac{x^2}{9 - 2x}$

A) $\frac{2x^3 - 4x^2 + 18x}{(9 - 2x)^2}$

C) $\frac{-6x^2 + 18x}{(9 - 2x)^2}$

B) $\frac{9x}{(9 - 2x)^2}$

D) $\frac{-2x^2 + 18x}{(9 - 2x)^2}$

6) _____

7) Find $\frac{dy}{dx}$ for $y = \frac{2x - 5}{7x^2 + 9}$

A) $\frac{dy}{dx} = \frac{-14x^2 + 70x + 18}{(7x^2 + 9)^2}$

C) $\frac{dy}{dx} = \frac{42x^2 - 70x + 18}{(7x^2 + 9)^2}$

B) $\frac{dy}{dx} = \frac{-14x^2 + 52x + 63}{(7x^2 + 9)^2}$

D) $\frac{dy}{dx} = \frac{14x^3 - 28x^2 + 88x}{(7x^2 + 9)^2}$

7) _____

Answer Key

Testname: PRACTICE08

- 1) A
- 2) C
- 3) D
- 4) C
- 5) D
- 6) D
- 7) A