

G11. Remake Quiz Chapter 7

Multiple Choice

Identify the choice that best completes the statement or answers the question.

_____ 1. $\frac{d}{dx}(4x^4) = \dots$

a. $5x^3$

b. $16x^4$

c. $16x^3$

d. $25x^4$

_____ 2. Given the function $f(x) = \frac{5}{3x^2}$. Find the differentiation of the function with respect to x

a. $\frac{10}{3x^3}$

b. $-\frac{10}{3x^3}$

c. $\frac{30}{x^3}$

d. $-\frac{30}{x^3}$

_____ 3. The first derivative of $y = 2x^2 + 7x$ is

a. $4x + 7$

b. $4x - 7$

c. $2x + 7$

d. $2x - 7$

_____ 4. If $f(x) = 3x^4 - 2x^2 + x + 7$ is given then find the value of $f'(-1)$.

a. -15

b. 9

c. 17

d. -7

_____ 5. If $f(x) = (x^5 + 6)^{14}$ is given, what is the value of $f'(x)$?

a. $5x^4(x^5 + 6)^{13}$

b. $14(x^5 + 6)^{13}$

c. $70x^4(x^5 + 6)^{13}$

d. $14(x^5 + 6)$

_____ 6. If $y = 2x^3 - 5x^2 + 4x - 7$ is given then find $\frac{dy}{dx}$?

a. $3x^2 - 5x - 4$

b. $6x^2 - 10x + 4$

c. $6x^2 - 10x - 7$

d. $3x^2 - 5x + 4$

Name: _____

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____ 7. Find the gradient of the curve $y = 2\sqrt{x}$ at (4,4)!

a. $\frac{1}{2}$
b. 1

c. $-\frac{1}{2}$
d. -1

____ 8. The coordinates of the point at which the gradient of the curve with equation $y = 3x^2$ has gradient 18 is

a. (-3,27)
b. (3,-27)

c. (3,27)
d. (-3,-27)

____ 9. Find the derivative of $y = \frac{5x^2 + 4x\sqrt{x} - 3}{x}$!

a. $10x + \frac{2}{\sqrt{x}} + \frac{3}{x^2}$
b. $10x + 2\sqrt{x} + \frac{3}{x^2}$

c. $10x + \frac{2}{\sqrt{x}} + \frac{3}{x}$
d. $10x + \frac{2}{x\sqrt{x}} + \frac{3}{x^2}$

____ 10. Differentiate $2\sqrt{5+3x}$ with respect to x !

a. $\frac{2}{3}\sqrt{5+3x}$
b. $\frac{6}{\sqrt{5+3x}}$

c. $\frac{3}{2\sqrt{5+3x}}$
d. $\frac{3}{\sqrt{5+3x}}$