Open Book Quiz !

G11. Quiz Chapter 7. Differentiation

1. Find the gradient of the curve $y = \frac{12}{x}$ at point $(4,3)$

   a. $\frac{3}{4}$
   b. $-\frac{3}{4}$
   c. -1
   d. -3

2. The derivative of $f(x) = -1$ is ....

   a. 0
   b. $-x$
   c. -1
   d. Can not be determined

3. The gradient of the curve $y = (2x-5)(x+4)$ at point $(3,7)$ is ....

   a. -7
   b. 7
   c. 10
   d. 15

4. Find the coordinates of the points on the curve $y = x^3 - 3x - 8$ where the gradient 9.

   a. $(-2,-10),(2,-6)$
   b. $(-2,10),(2,6)$
   c. $(2,10),(2,6)$
   d. $(-2,-10),(-2,-6)$

5. Differentiate $2(4-7x)^4$ with respect to x !

   a. $56(4-7x)^3$
   b. $-56(4-7x)^3$
   c. $-8(4-7x)^3$
   d. $8(4-7x)^3$

6. The differentiation of $f(x) = \frac{1}{\sqrt{2x-5}}$ is ....

   a. $-\frac{1}{\sqrt{(2x-5)^2}}$
   b. $\frac{1}{\sqrt[3]{(2x-5)^2}}$
   c. $-\frac{1}{\sqrt{(2x-5)^3}}$
   d. $\frac{1}{\sqrt{(2x-5)^3}}$

7. Find the equation of the tangent of curve $y = (2x-5)^4$ at the point $(2,1)$ ....

   a. $y = 3x - 7$
   b. $y = 3x + 9$
   c. $y = -8x + 17$
   d. $y = -8x - 17$

8. Find $\frac{d^2y}{dx^2}(2x-3)^4$!

   a. $4(2x-3)^3$
   b. $8(2x-3)^3$
   c. $24(2x-3)^2$
   d. $48(2x-3)^2$

9. If $f'(x) = 5x^3 - 7x^2 + 5$, then $f''(x)$ is ....

   a. $90x - 14$
   b. $90x + 14x$
   c. $45x^2 - 14x$
   d. $45x^2 + 14x$

10. Given that $f(x) = x^3 + 2x^2 - 3x - 1$, find $f''(1)$ ...

    a. -1
    b. 4
    c. 10
    d. 14