1. For all x in the given interval , if f'(x)>0, then f(x) is

    a. decreasing in the interval

    b. constant in the interval

    c. increasing in the interval

    d. Undefined in the interval

2. Which of the following is the second derivativeof $f(x) = 4x^3 - 11x^2 - 14x + 19$?

a. $f''(x) = 4x - 11$.
b. $f''(x) = 12x^2 - 22x - 14$.
c. f''(x) = 24x - 22.
d. f''(x) = 12x - 22.

3. Horizontal asysmptote gives the value of y as

    a. infiniti

    b. none of the above
    c. constant value
    d. interval

4. state whether given function is differentiable.
    f(x)= 4x+1, , x<=2
      = x^2 + 5, x>2
    a.   not differentiable
    b.   differentiable
    c.   none of the above

5 Which of the following is the second derivativeof $f(x) = -2x^4 + 3x^{-2} + 9$?

    a. $f''(x) = -24x^2 + 18x^{-4}$

    b. $f''(x) = -$

    c. $f''(x) = -$

    d. f''(x)= -8x^3-6x^-3

For all x in the given interval, if f'(x)<0, then f(x) is

a. constant in the interval

b. Undefined in the interval

c. decreasing in the interval

d. increasing in the interval

7. Which of the following is the derivative of $f(x) = \sqrt{x}$?

a. $f'(x) = \dfrac{1}{2\sqrt{x}}$.

b. $f'(x) = \sqrt{1}$.

c. $f'(x) = \dfrac{3}{2}\sqrt{x^2}$.

d. $f'(x) = \dfrac{2}{3}\sqrt{x^3}$.

8. What is the value of absolute of x ?(|x|)

a. positive and negative of x

b. negative of x

c. all of the above

d. positive x

9. Which of the following is thederivative
ofy=3x² +4?

a. 6x+4

b. 6x+x

c. 6

d. 6x

10. Which of the following is thederivative
of $y = \dfrac{1}{x}$?

a. $\dfrac{dy}{dx} = \dfrac{1}{2x^2}$.

b. $\dfrac{dy}{dx} = -\dfrac{1}{x^2}$.

c. $\dfrac{dy}{dx} = \ln x$.

d. $\dfrac{dy}{dx} = \dfrac{1}{x^2}$.