Question

1 Find the value of

$$f(x) = x^3 + x^2 - 5x + 1,$$

when $x = 2$

6

4

3

1

Solution

In the given question, we need to find the value of f(x), when x is equal to 2.

Thus, we have to substitute this value of x into the given function.

If $x = 2$, then

$$f(2) = (x^3 + x^2 - 5x + 1)|_{x=2} = 2^3 + 2^2 - 5 \cdot 2 + 1 = 8 + 4 - 10 + 1 = 3$$

Thus, we have come to the following conclusion:

the value of function f(x) is equal to 3 when $x = 2$.

Answer: $f(2) = 3$.

Question

2 Evaluate the value of f(x − 2), if $f(x) = x^2 + 5x + 5$

x2+X+4

x2−x−3

x2+2X+4

x2+x−5

Solution

In this case, we substitute $(x - 2)$ into the equation for x:

$$f(x - 2) = (x - 2)^2 + 5(x - 2) + 5 = x^2 - 4x + 4 + 5x - 10 + 5 = x^2 + x - 1.$$

The expression was simplified by opening the parenthesis and combing the like terms.

Thus, we got the following result:

$f(x - 2) = x^2 + x - 1.$

Answer: $f(x - 2) = x^2 + x - 1.$