Answer on Question #47079 – Math – Differential Calculus | Equations

Question:

Differentiate with respect to x:f(x)=(x+x^5)

1−5x^2

1+5x^4

5x^4−1

x−5x^4

Solution:

The rule for sum of functions:

$$(f + g)' = f' + g'$$

Therefore using differentiation of power function, obtain

$$f'(x) = (x + x^5)' = (x)' + (x^5)' = 1 + 5x^4$$

Answer: $1 + 5x^4$