

Name: _____

Evaluating Polynomial Functions

ES1

A) Evaluate each function at the specified values.

1) $f(x) = 3x^6 + 2x^2 - 7x + 15$; $x = 1$

2) $f(x) = x^5$; $x = -3$

B) Evaluate each function.

1) $f(x) = x^4 - 4x + 10$; find $f(4)$

2) $f(x) = 5x^6 + 3x^3 - 2x^2 - 6$; find $f(-2)$

C) If $f(x) = -x^3 - 8x^2 - 9x + 12$; find the following.

1) $f(3) =$ _____

2) $f(-9) =$ _____

3) $f(-7) =$ _____

4) $f(0) =$ _____

D) If $f(x) = -x^4 + 5x^3$; find the following.

1) $f(7) + 3f(5) =$ _____

2) $f(-3) - 7f(-2) =$ _____

3) $-f(1) \times f(4) =$ _____

4) $\frac{f(-6)}{f(6)} =$ _____

E) What is the value of $f(3)$, if $f(x) = x^6 - 14$?

i) 715

ii) 734

iii) -710

iv) -725

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250**282**C) If $f(x) = -x^3 - 8x^2 - 9x + 12$; find the following.

1) $f(3) =$ **-114**

2) $f(-9) =$ **174**

3) $f(-7) =$ **26**

4) $f(0) =$ **12**

D) If $f(x) = -x^4 + 5x^3$; find the following.

1) $f(7) + 3f(5) =$ **-686**

2) $f(-3) - 7f(-2) =$ **176**

3) $-f(1) \times f(4) =$ **-256**

4) $\frac{f(-6)}{f(6)} =$ **-11**

E) What is the value of $f(3)$, if $f(x) = x^6 - 14$?

i) **715**

ii) **734**

iii) **-710**

iv) **-725**