

Solving Polynomial Functions

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Date_____ Period_____

Evaluate each function at the given value.

1) $f(a) = 6a^3 + 39a^2 + 19a + 9$ at $a = -6$

2) $f(n) = 6n^4 - 17n^3 + 14n^2 - 3n + 2$ at $n = 2$

3) $f(m) = 3m^3 + 17m^2 + 14m + 28$ at $m = -5$

4) $f(a) = -5a^3 - 9a^2 + 19a + 1$ at $a = -3$

5) $f(a) = -3a^3 - 10a^2 - 6a + 1$ at $a = -2$

6) $f(a) = a^4 + 6a^3 + 5a^2 - 3a - 3$ at $a = -2$

Find all zeros.

7) $f(x) = -15x^3 + 49x^2 - 19x - 35$

8) $f(x) = 4x^3 - x^2 - 4x + 1$

9) $f(x) = 11x^3 + 2x^2 - 11x - 2$

10) $f(x) = 20x^3 - 23x^2 - 19x + 10$

11) $f(x) = -6x^3 + 5x^2 + 42x - 20$

12) $f(x) = -9x^3 + 30x^2 + 63x - 20$

$$13) f(x) = -16x^4 - 56x^3 - 49x^2 - 4x + 5$$

$$14) f(x) = 15x^4 + 16x^3 - 67x^2 + 44x - 8$$

$$15) f(x) = 9x^4 - 27x^3 + 35x^2 - 14x$$

$$16) f(x) = -44x^4 - 125x^3 - 132x^2 - 55x - 4$$