Integrated Math 3 Name_____

Final Review - Polynomial Functions

Date_____ Period____

Divide.

1) $(5p^3 + 19p^2 + 18p + 21) \div (p + 3)$

2) $(7p^3 + 4p^2 - 5p + 4) \div (p + 1)$

Describe the end behavior of each function.

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

4) $f(x) = -x^5 + 4x^3 - x$

5) $f(x) = x^5 - 4x^3 + 3x$

6) $f(x) = -x^3 + 8x^2 - 20x + 13$

Evaluate each function at the given value.

7) $f(x) = 3x^4 + 15x^3 + 11x^2 + x + 23$ at $x = -4$

8) $f(a) = -2a^4 + 10a^3 - 5a^2 - 7a - 29$ at $a = 4$

Find all zeros. One zero has been given.

9) $f(x) = 5x^4 + 36x^3 + 62x^2 + 36x + 5;\ -5$

10) $f(x) = 2x^4 + 5x^3 - 6x^2 - 9x;\ -3$

Find all zeros.

11) $f(x) = 3x^3 + 7x^2 - 7x - 3$

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

Write a polynomial function of least degree with integral coefficients that has the given zeros.

13) $-1,\ 1,\ -\frac{5}{3}$

14) $0,\ -1,\ -5$

15) 3 mult. 2, $-\frac{1}{2}$

16) $-\frac{1}{5},\ 0,\ 2i,\ -2i$