

End Behavior and Factoring Polynomials Practice

Date _____ Period _____

Describe the end behavior of each function.

1) $f(x) = 2x^2 + 8x + 8$

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

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

4) $f(x) = x^5 - 2x^3 + x - 4$

5) $f(x) = x^2 + 8x + 14$

6) $f(x) = x^2 - 2$

7) $f(x) = x^2 + 4x - 2$

8) $f(x) = -2x^2 + 16x - 29$

9) $f(x) = x^3 - 6x^2 + 9x - 7$

10) $f(x) = x^3 - 3x^2 + 6$

Find all roots.

11) $x(5x + 1)(x + 1) = 0$

12) $(x + 1)(x - 1)(2x + 1) = 0$

13) $(x + 1)^2(5x - 1) = 0$

14) $(2x - 1)(x + 1)(x - 1) = 0$

15) $(5x + 1)(x + 1)^2 = 0$

16) $(3x + 1)(x - 1)^2 = 0$

17) $5x^3 - 8x^2 + 3x = 0$

18) $2x^3 - 11x^2 + 15x = 0$

19) $5x^3 + 19x^2 + 12x = 0$

20) $3x^3 - 8x^2 - 3x = 0$