

Algebra II Honors – Introduction to Polynomials

Classification & End Behavior

Page 285 #8-30 even only.

Write each polynomial in standard form. Then classify it by degree and by number of terms.

 See Problem 1.

8. $7x + 3x + 5$

9. $5 - 3x$

10. $2m^2 - 3 + 7m$

11. $-x^3 + x^4 + x$

12. $-4p + 3p + 2p^2$

13. $5a^2 + 3a^3 + 1$

14. $-x^5$

15. $3 + 12x^4$


16. $6x^3 - x^3$

17. $7x^3 - 10x^3 + x^3$

18. $4x + 5x^2 + 8$

19. $x^2 - x^4 + 2x^2$

Determine the end behavior of the graph of each polynomial function.

 See Problem 2.

20. $y = -7x^3 + 8x^2 + x$

21. $y = -3x + 6x^2 - 1$

22. $y = 1 - 4x - 6x^3 - 15x^6$

23. $y = 8x^{11} - 2x^9 + 3x^6 + 4$

24. $y = -x^5 - 15x^7 - 4x^9$

25. $y = -3 - 6x^5 - 9x^8$

26. $y = x^4 - 7x^2 + 3$

27. $y = -8x^7 + 16x^6 + 9$

28. $y = -14x^6 + 11x^5 - 11$

29. $y = -x^3 - x^2 + 3$

30. $y = x^3 - 14x - 4$

31. $y = 5 - 17x^7 + 9x^{10}$

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