

GRAPHING POLYNOMIALS MATCHING REVIEW

Directions: Complete the chart below with information about the degree, leading coefficient, and end behavior of the function. Then use the graphs included on the next page to match the graph with its corresponding polynomial function. - no calculator!

Polynomial Function	Degree	Leading Coefficient	End Behavior	Circle the matching graph
$f(x) = \frac{1}{2}(x+2)^3$	#1. 3	#2. $\frac{1}{2}$	#3. $x \rightarrow \infty, y \rightarrow \infty$ $x \rightarrow -\infty, y \rightarrow -\infty$	#4. a b c <u>d</u> e f g h i j
$f(x) = (x+1)(x-2)$	#5. 2	#6. 1	#7. $x \rightarrow \infty, y \rightarrow \infty$ $x \rightarrow -\infty, y \rightarrow \infty$	#8. <u>a</u> b c d e f g h i j
$f(x) = x^3 - 4x^2 + 6$	#9. 3	#10. 1	#11. $x \rightarrow \infty, y \rightarrow \infty$ $x \rightarrow -\infty, y \rightarrow -\infty$	#12. a <u>b</u> c d e f g h i j
$f(x) = -(x-2)^4 + 3$	#13. 4	#14. -1	#15. $x \rightarrow \infty, y \rightarrow -\infty$ $x \rightarrow -\infty, y \rightarrow -\infty$	#16. a b c d e <u>f</u> g h i j
$f(x) = \frac{1}{4}(x+1)^2(x-4)$	#17. 3	#18. $\frac{1}{4}$	#19. $x \rightarrow \infty, y \rightarrow \infty$ $x \rightarrow -\infty, y \rightarrow -\infty$	#20. a b <u>c</u> d e f g h i j
$f(x) = -(x+6)(x+7)$	#21. 2	#22. -1	#23. $x \rightarrow \infty, y \rightarrow -\infty$ $x \rightarrow -\infty, y \rightarrow -\infty$	#24. a b c d e f g h <u>i</u> j
$f(x) = 2(x-3)^3$	#25. 3	#26. 2	#27. $x \rightarrow \infty, y \rightarrow \infty$ $x \rightarrow -\infty, y \rightarrow -\infty$	#28. a b c d <u>e</u> f g h i j
$f(x) = (x+1)(x-1)(x-3)$	#29. 3	#30. 1	#31. $x \rightarrow \infty, y \rightarrow \infty$ $x \rightarrow -\infty, y \rightarrow -\infty$	#32. a b c d e f <u>g</u> h i j
$f(x) = -x^4 + 3x^3 + x^2 - 4x$	#33. 4	#34. -1	#35. $x \rightarrow \infty, y \rightarrow -\infty$ $x \rightarrow -\infty, y \rightarrow -\infty$	#36. a b c d e f g <u>h</u> i j
$f(x) = x^4 + x^3 - 5x^2 + 4$	#37. 4	#38. 1	#39. $x \rightarrow \infty, y \rightarrow \infty$ $x \rightarrow -\infty, y \rightarrow \infty$	#40. a b c d e f g h i <u>j</u>