

# Algebra II Honors – You will need graph paper!

Pg 293 #7-26

Write each polynomial in factored form. Check by multiplication.

◀ See Problem 1.

7.  $x^3 + 7x^2 + 10x$

8.  $x^3 - 7x^2 - 18x$

9.  $x^3 - 4x^2 - 21x$

10.  $x^3 - 36x$

11.  $x^3 + 8x^2 + 16x$

12.  $9x^3 + 6x^2 - 3x$

Find the zeros of each function. Then graph the function.

◀ See Problem 2.

13.  $y = (x - 1)(x + 2)$

14.  $y = (x - 2)(x + 9)$

15.  $y = x(x + 5)(x - 8)$

16.  $y = (x + 1)(x - 2)(x - 3)$

17.  $y = (x + 1)(x - 1)(x - 2)$

18.  $y = x(x + 2)(x + 3)$

Write a polynomial function in standard form with the given zeros.

◀ See Problem 3.

19.  $x = 5, 6, 7$

20.  $x = -2, 0, 1$

21.  $x = -5, -5, 1$

22.  $x = 3, 3, 3$

23.  $x = 1, -1, -2$

24.  $x = 0, 4, -\frac{1}{2}$

25.  $x = 0, 0, 2, 3$

26.  $x = -1, -2, -3, -4$

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