

## Leading coefficients, degree, constant, multiplying, graphs mins maxs &amp; zeros

**Identify the leading coefficient, degree, constant for the following polynomials.**

1)  $2b^5 + 3b^3$

2)  $1 - 3x$

3)  $-6a^5 - 8a^4 + 5a^2$

4)  $-1 - 10n^3 + 2n^4$

5)  $-1 + n^3 - 3n^2$

6)  $-x - 8$

**Write the polynomial in standard form.**

7)  $4k^5 + 10k - 4k^2$

8)  $k^2 - 5 - 9k^3$

9)  $6n^3 - 8 + n^2$

10)  $5 - 4n^5$

11)  $4v^2 - 8 + 8v^3$

12)  $8m^5 - 9m^2$

**Find each product.**

13)  $3(7n + 1)$

14)  $6(4x - 4)$

15)  $(6n + 1)(7n - 3)$

16)  $(6a - 3)(6a - 8)$

17)  $(p + 5)(2p^2 - 6p + 4)$

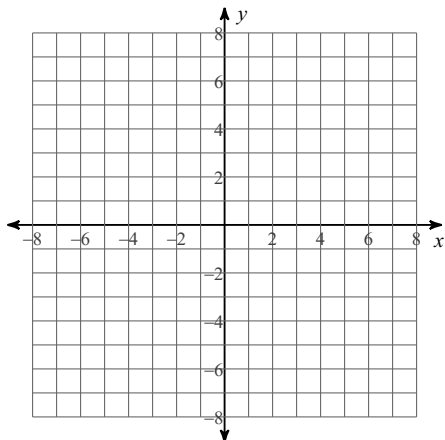
18)  $(4x + 6)(7x^2 + 5x + 6)$

19)  $2b^3(7b^2 + 7b + 2)$

20)  $8(v^2 + 6v + 6)$

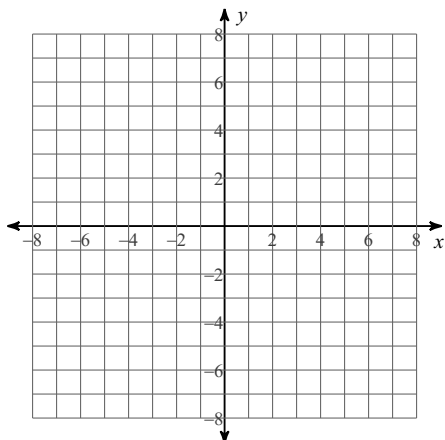
Sketch the graph of each function. Approximate the minimum(s) using your graphing technology.

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



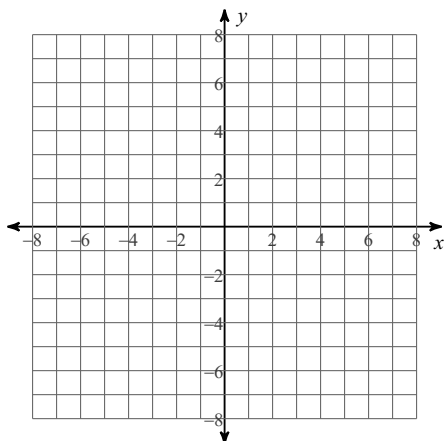
Sketch the graph of each function. Approximate the maximum(s) using your graphing technology.

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



Sketch the graph of each function. Approximate the zero(s) using your graphing technology.

23)  $f(x) = 2x^2 + 4x + 4$



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

