

1. Factor completely.

a. $6x^3 + 10x^2 - 4x$

b. $u^2 - u - 20$

c. $-5y^3 + 20y$

d. $12m^2 - 11m + 2$

e. $30t^2 + 290t + 180$

f. $4x^3 + 10x^2 - 6x$

g. $24d^4 - 4d^3 - 28d^2$

h. $-4y^3 + 64y$

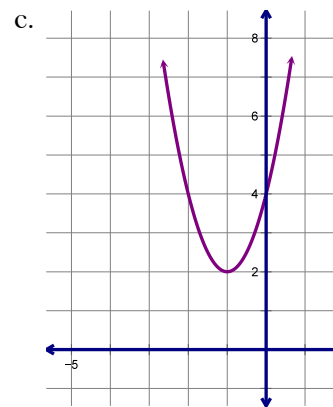
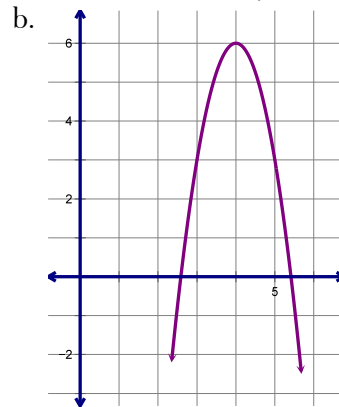
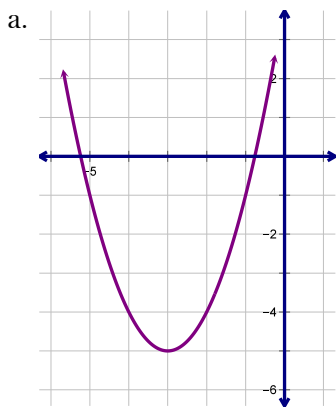
2. Rewrite each function in general (standard) form.

a. $y = 4(x+1)^2 - 16$

b. $y = 2(x-3)^2 + 5$

c. $y = -3(x-2)^2 + 25$

3. Write the equation of the function in general (standard) form and vertex form.



4. Rewrite each function in general (standard) form, then sketch a complete graph.

a. $p(x) = (3x+1)(3x-13)$

b. $k(x) = -(x+8)(x+2)$

c. $g(x) = (2x-3)(2x+15)$

5. Find the y -intercept, the x -intercepts, the equation for the line of symmetry, and the vertex. Then sketch a complete graph.

a. $a(x) = x^2 + 10x + 24$

b. $n(x) = -2x^2 + 12x + 14$

c. $h(x) = 4x^2 + 8x - 21$

6. Determine the degree of the polynomial.

a.

x	-5	-3	-1	1	3	5
y	-40	-2	4	26	112	310

b.

x	3	4	5	6	7	8
y	63	38	17	0	-13	-22