Quadratics

1. Write each of the following in standard form.

a. $y=(x+3)(x-4)$ c. $y=-(x+1)(x-3)$ e. $y=(3x-5)^2$

b. $y=3(x-2)(x-5)$ d. $y=-(x-5)(x+5)$ f. $f(x)=2(x-5)^2-4$

2. Write each of the following in factored (intercept) form.

a. $y=2x^2+4x$ b. $y=x^2+4x-32$ c. $y=x^2-64$

4. Determine the roots, axis of symmetry, optimum value (max/min value), y-intercept, direction of opening and the vertex for each of the following.

a. $y=(x-3)(x+5)$ c. $y=-3(x-2)(x+1)$ e. $y=2x^2-4x-48$

b. $y=-(x-2)^2$ d. $y=x^2-9$

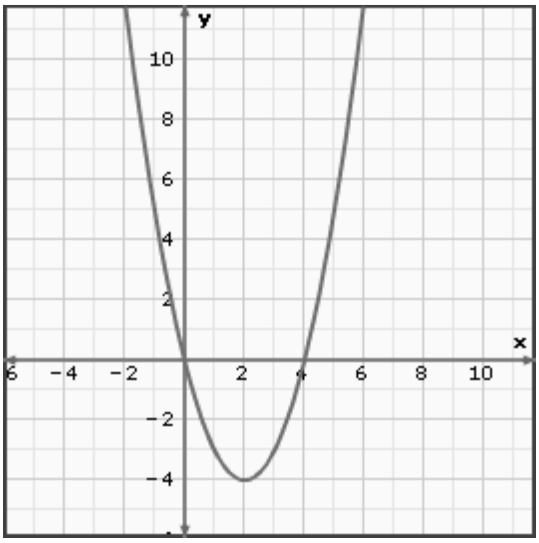
5. Graph the parabolas in question 4.

6. State the transformations for each of the parabolas below and graph each of the following using transformations.

a. $y=3(x-4)^2+5$ b. $y=-(x+4)^2-2$ c. $f(x)=x^2-25$

8. Find the equation of each of the parabolas.

a.



b.