Part A: Match each equation to its graph.

1. \( y = -(x + 2)(x - 3) \)
2. \( f(x) = (x - 2)(x + 3) \)
3. \( g(x) = (x - 3)(x + 2) \)
4. \( h(x) = (x - 4)(x + 1) \)
5. \( k(x) = (x - 1)(x + 4) \)
6. \( t(x) = -(x - 1)(x + 4) \)
7. \( y = (x - 1)(x - 4) \)
8. \( y = -(x - 1)(x - 4) \)
9. \( f(x) = (x - 0)(x - 4) \)
10. \( g(x) = (x + 2)(x + 2) \)
11. \( h(x) = -(x + 3)(x + 3) \)
12. \( k(x) = (x + 4)(x + 1) \)
Part B: Look carefully at quadratic graphs when the equation is in factored form.

1. Consider the quadratic relation \( y = \frac{1}{2}(x - 1)(x + 4) \)

   a. The x-intercepts are ______________________

   b. The equation of the axis of symmetry is ______

   b. The vertex is at: ___________

   d. List the transformations

   g. Graph the relation.

2. Consider the quadratic relation \( y = -2(x - 3)(x + 5) \)

   c. The x-intercepts are ______________________

   d. The equation of the axis of symmetry is ______

   b. The vertex is at: ___________

   d. List the transformations

   g. Graph the relation.
3. Consider the quadratic relation \( y = -\frac{1}{2}(x + 2)(x + 6) \)

   e. The x intercepts are ______________________

   f. The equation of the axis of symmetry is ______

   b. The vertex is at : __________

   d. List the transformations:

   g. Graph the relation.

4. Consider the quadratic relation \( y = 2(x - 2)(x + 2) \)

   g. The x intercepts are ______________________

   h. The equation of the axis of symmetry is ______

   b. The vertex is at : __________

   d. List the transformations:

   g. Graph the relation.
5. Consider the quadratic relation \( y = -2(x + 3)^2 - 3 \)

   a. The vertex is at: ___________
   b. The equation of the axis of symmetry is _______
   c. Maximum or minimum _____________
   d. Step pattern is ________________
   e. List the transformations:

   f. Graph the relation

6. Consider the quadratic relation \( y = 2(x - 3)^2 - 2 \)

   a. The vertex is at: ___________
   b. The equation of the axis of symmetry is _______
   c. Maximum or minimum _____________
   d. Step pattern is ________________
   e. List the transformations:

   f. Graph the relation
7. Consider the quadratic relation $y = -(x + 4)^2 - 3$

a. The vertex is at: ___________

b. The equation of the axis of symmetry is ___________

c. Maximum or minimum ___________

d. Step pattern is ___________

e. List the transformations:

f. Graph the relation

8. Consider the quadratic relation $y = \frac{1}{2}(x - 1)^2 + 4$

a. The vertex is at: ___________

b. The equation of the axis of symmetry is ___________

c. Maximum or minimum ___________

d. Step pattern is ___________

e. List the transformations:

f. Graph the relation