The following quadratics will be given in both the vertex form and standard form;

For each question that you are assigned list out the following:

1. The vertex: in the form (h,k)
2. The horizontal position of the vertex: in the form h=#
3. The vertical position of the vertex: in the form k=#
4. The leading coefficient: in the form a=#
5. Whether the parabola opens up or down
6. The domain
7. The range
8. The y-intercept: in the form c=#
9. The discriminant: in the form D=#
10. The number of real roots

If your first name begins with an A, B, C, D, or E you should try the following:

I. ***Standard Form:*** $y = -10x^2 - 10x - 4$ ***Vertex Form:*** $y = -10(x + 0.5)^2 - 1.5$

II. ***Standard Form:*** $y = 8x^2 - 3x + 9$ ***Vertex Form:*** $y = 8(x - 0.1875)^2 + 8.719$

III. ***Standard Form:*** $y = 9x^2 + 7x - 2$ ***Vertex Form:*** $y = 9(x + 0.3889)^2 - 3.361$

IV. ***Standard Form:*** $y = x^2$ ***Vertex Form:*** $y = x^2$

If your first name begins with an F, G, H, I, or J you should try the following:

V. ***Standard Form:*** $y = 10x^2 + 4x + 4$ ***Vertex Form:*** $y = 10(x + 0.2)^2 + 3.6$

VI. ***Standard Form:*** $y = -8x^2 + 3x - 9$ ***Vertex Form:*** $y = -8(x - 0.1875)^2 - 8.719$

VII. ***Standard Form:*** $y = -9x^2 + 7x + 2$ ***Vertex Form:*** $y = -9(x - 0.3889)^2 + 3.361$

VIII. ***Standard Form:*** $y = x^2$ ***Vertex Form:*** $y = x^2$

If your first name begins with an K, L, M, N, or O you should try the following:

IX. ***Standard Form:*** $y = 2x^2 - 12x + 22$ ***Vertex Form:*** $y = 2(x - 3)^2 + 4$

X. ***Standard Form:*** $y = 8x^2 - 3x + 9$ ***Vertex Form:*** $y = 8(x - 0.1875)^2 + 8.719$

XI. ***Standard Form:*** $y = -x^2 + 5$ ***Vertex Form:*** $y = -x^2 + 5$

XII. ***Standard Form:*** $y = x^2$ ***Vertex Form:*** $y = x^2$

If your first name begins with an P, Q, R, S, or T you should try the following:

XIII. ***Standard Form:*** $y = -10x^2 - 80x - 150$ ***Vertex Form:*** $y = -10(x + 4)^2 + 10$

XIV. ***Standard Form:*** $y = x^2 - x + 0.75$ ***Vertex Form:*** $y = (x - 0.5)^2 + 0.5$

XV. ***Standard Form:*** $y = -x^2 + 5$ ***Vertex Form:*** $y = -x^2 + 5$

XVI. ***Standard Form:*** $y = x^2$ ***Vertex Form:*** $y = x^2$

If your first name begins with an U, V, W, X, Y or Z you should try the following:

XVII. ***Standard Form:*** $y = -10x^2 - 10x - 4$ ***Vertex Form:*** $y = -10(x + 0.5)^2 - 1.5$

XVIII. ***Standard Form:*** $y = -8x^2 + 3x - 9$ ***Vertex Form:*** $y = -8(x - 0.1875)^2 - 8.719$

XIX. ***Standard Form:*** $y = x^2 + 5$ ***Vertex Form:*** $y = x^2 + 5$

XX. ***Standard Form:*** $y = x^2$ ***Vertex Form:*** $y = x^2$