

U2 Day 8 HW – Finding the Equation of a Parabola from Focus and Directrix

1. Find the standard form quadratic equation given the focus and directrix. **Show all your work.**

a) focus: $(-3, 4)$ directrix: $y = 2$

b) focus: $(5, -1)$ directrix: $y = -4$

c) focus: $(-2, 7)$ directrix: $y = 4$

d) focus: $(4, -5)$ directrix: $y = -9$

2. Check your standard form equation with your calculator and then use p or $-b/2a$ to find the vertex coordinates. Then write the quadratic in vertex form.

a) vertex: vertex form: $y =$

b) vertex: vertex form: $y =$

c) vertex: vertex form: $y =$

d) vertex: vertex form: $y =$

3. Find the **real** zeros of **ONE** quadratic (your choice) using the quadratic formula. **Show all your work.**

Then use “inside opposite” to write the factored form of the equation.

1. ____) zeros: factored form: $y =$