Honors Algebra II Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

LT 8-2: Complex Numbers Day 3 Period\_\_\_\_

**For each of the following functions: a) find the discriminant, b) describe the number and type of zeros, and c) find the zeros.**

1) $f\left(x\right)=2x^{2}+4x+7$ 2) $f\left(x\right)=x^{2}+6x+9$

3) $f\left(x\right)=4x^{2}-9x+6$ 4) $f\left(x\right)=3x^{2}+6x-5$

**Find the standard form of a polynomial function with the given zeros:**

5)–7 and 6 6) $3i$ and $-3i$

7) $\left(-4+i\right),\left(-4-i\right)$ 8) $\left(3+5i\right),\left(3-5i\right)$

9) $\left(1+i\sqrt{3}\right),\left(1-i\sqrt{3}\right)$ 10) $5i, -5i, -2i, 2i, and 3$

11) If f(x) = x2 − 8x + 12, calculate the values below.

a. *f*(−4) b. *f*(*i*) c. *f*(−2 + *i*)