AFM UNIT 4 - HW 2 Name_____

Writing Equations Given Zeros

A polynomial function with rational coefficients has the following zeros. Find all additional zeros. DO NOT WRITE THE EQUATION OF THE FUNCTION.

1) $-3 + 2i,\ \ -3 + \sqrt{6}$

2) $\sqrt{6},\ \ 1 + i$

3) $3 + \sqrt{10},\ \ 3 + \sqrt{7}$

4) $-2i,\ \ -2 + \sqrt{3}$

Write a polynomial function of least degree with integral coefficients that has the given zeros.

5) $\frac{2}{3},\ \ 1 + 3i,\ \ 2i$

6) 3 mult. 2, 0, −5

7) 0 mult. 3

8) $1,\ \ 2 + \sqrt{7}$

9) −2 mult. 3

10) $-1,\ \ 2 - i$

11) $4,\ \ -i$

12) −1 mult. 2, 2

13) $\frac{4}{3},\ \ -3i$

14) $-4,\ \ 4,\ \ -\frac{1}{4}$