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

Lesson 6-5 & 6-6 Practice Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Hour\_\_\_\_\_\_\_\_\_\_\_

A polynomial equation with rational coefficients has the given roots. Find two additional roots.

1. 2) 3) 4)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

For each equation, state the number of complex roots, and the possible number of real roots. Also list the possible rational roots.

5) 3x2 – 7 6) 2x5 – 4x4 – 4x2 + 5 = 0 7) x3 – 4x2 + 9x - 36

Number of complex roots:\_\_\_\_\_

Possible Number of

real roots;\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Possible rational roots:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Number of complex roots:\_\_\_\_\_

Possible Number of

real roots;\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Possible rational roots:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Number of complex roots:\_\_\_\_\_

Possible Number of

real roots;\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Possible rational roots:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Solve each equation by finding all the complex roots.

8) 9)

x = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ x = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10. 11.

x = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ x = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

12) 13.

x = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ x = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_