Name _____ Date _____

The Fundamental Theorem of Algebra - Independent Practice Worksheet

Complete all the problems.

1. What are the roots of $y^2 - 56$?

2. What are the roots of $x^2 - 81$?

3. What are the roots of $y^2 - 144$?

4. What are the roots of $x^2 - 21$?

5. Solve the equation and write any complex solutions in the form a + bi, where a and b are real numbers.

$5x^2 + 80 = 0$

6. Solve the equation and write any complex solutions in the form a + bi, where a and b are real numbers.

$9x^2 + 270 = 0$

7. Solve the equation and any complex solutions in the form a + bi, where a and b are real numbers.

$50x^2 + 200 = 0$

8. Find a polynomial with integer coefficients satisfying the following conditions:

Degree 3 with roots 9, 2, and 0.

9. Find a polynomial with integer coefficients satisfying the following conditions:

Degree 3 with roots 5, -8, and 9.

10. Find a polynomial with integer coefficients satisfying the following conditions:

Degree 3 with roots -4, 3, and 14.