Unit 1 (4.5)

Alg2 – Factoring and Writing Equations Formative Assessment ($a \neq 1$) Name: Key - no work

Solve by factoring:

1. $2x^2 - 7x - 15 = 0$

$x = 5 \quad x = -\frac{3}{2}$

Given the zero(es), write the equation of least degree (assume $a = 1$).

2. $x = 1 + 7i,\ x = -2$

$y = x^3 + 46x + 100$

Given the zero(es) and an ordered pair, write a polynomial equation of least degree.

3. $x = -3,\ x = 3,\ x = 1\ \boldsymbol{thru}\ (4, -63)$

$y = -3(x^3 - 1x^2 - 9x + 9)$

4. $x = 6 - 3i\ \boldsymbol{with\ a\ y-intercept\ of}\ 90$

Write your answer in standard form.

$y = 2x^2 - 24x + 90$

5. $x = 2,\ x = 4i\ \boldsymbol{thru}\ (3, -5)$

$y = -\frac{1}{5}(x^3 - 2x^2 + 16x - 32)$