

Name:

Period:

Date:

### Practice Worksheet: Working with Complex Numbers

Simplify the expression completely using complex numbers. Give your answer in a+bi form.

1] $(4 - 3i) + (2 + 6i)$	2] $(-4 - i) - (4 + 5i)$	3] $(5 - 3i) + (-3 - 6i)$	4] $3i(4 + 2i)$
5] $(2 + i)(4 + 2i)$	6] $(7 + 3i)(7 - 3i)$	7] $(-2 - 5i)^2$	8] $4(-2 + i)^2 - 5(i + 6)$

Solve the quadratic equation using the square root method. Show all work.

9] $5x^2 + 13 = 2x^2 + 4$	10] $-2(x - 1)^2 - 36 = 0$	11] $2(x + 6)^2 + 10 = -10$
12] $2(x^2 - 3) = x^2 - 12$	13] $-2(4x - 4)^2 = 8$	14] $4(8x + 2)^2 + 320 = 0$

15] Circle the equations that will produce a graph with no x-intercepts.

A.  $y = 4x^2 + 12$     B.  $y = -(x - 12)^2 + 1$     C.  $y = (x + 12)^2 + 1$     D.  $y = \frac{1}{12}x^2 - 12$     E.  $y = -12x^2$