Name_____ Algebra 2 Take-Home Quiz 4.5 – 4.8

You must show all your work/steps.

Solve the equation.

1. $9x^2 = 36$

2. $5(x - 2)^2 = 35$

3. $-4(x - 8)^2 = 16$

Write the expression as a complex number in standard form.

4. $(7 - 4i) + (8 + 6i)$

5. $(-2 + 15i) - (8 - 3i)$

6. $(5 - i)(9 + 3i)$

7. $(8 - 3i)(-6 - 10i)$

8. $\frac{6i}{1-2i}$

9. $\frac{-2-5i}{3i}$

Write the quadratic function in vertex form. Then, identify the vertex.

10. $y = x^2 - 16x + 56$

Write the quadratic function in vertex form. Then, identify the vertex.

11. $y = x^2 - 8x + 11$

12. $y = x^2 - 8x + 19$

Solve each equation by completing the square.

13. $x^2 + 4x - 10 = 0$

14. $x^2 - 18x + 86 = 0$

Solve each equation by using the quadratic formula.

13. $x^2 - 6x + 10 = 0$

14. $-3x^2 + 10x + 2 = 0$

Bonus: Solve $x^2 + bx + c = 0$ by completing the square. Your answer will be an expression for x in terms of b and c.