

## Review: Standard 4D Complex Numbers and 4E Systems of Equations

Name: \_\_\_\_\_ Hr: \_\_\_\_\_

Write each expression in simplest form.

1.  $(4-2i)+(2+3i)$

2.  $(2-i)-(4+5i)$

3.  $(2-i)(6+5i)$

4.  $(4-5i)(4+5i)$

Write each expression in simplest form.

5.  $\sqrt{-100}$

6.  $\sqrt{-192}$

Solve. Circle your solutions as well as show all work.

7.  $x^2 - 7x = 8$

8.  $2x^2 - x + 4 = 0$

9.  $x^2 + 5 = -3x$

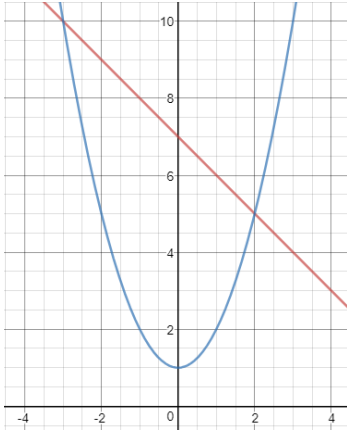
10.  $3x^2 - 16 = -7$

11.  $2x^2 + 10 = -18$

Solve each system of equations.

$$12. \begin{cases} y = -x + 7 \\ y = x^2 + 1 \end{cases}$$

$$13. \begin{cases} y = x^2 + 3x + 2 \\ -3x + y = 3 \end{cases}$$



$$14. \begin{cases} y = x^2 \\ y - 8 = -x^2 \end{cases}$$

$$15. \begin{cases} y = 12 - 6x \\ x^2 + y = 4 \end{cases}$$

$$16. \begin{cases} x^2 + y^2 = 25 \\ x + y = 7 \end{cases}$$