Lesson 17 Practice Problems

1. Find the solution or solutions to each equation.

   a. $x^2 + 0.5x - 14 = 0$

   b. $x^2 + 12x + 36 = 0$

   c. $x^2 - 3x + 8 = 0$

   d. $x^2 + 4 = 0$

2. Which describes the solutions to the equation $x^2 + 7 = 0$?

   A. One real solution

   B. Two real solutions

   C. One non-real solution

   D. Two non-real solutions

3. Explain how you know $\sqrt{3x + 2} = -16$ has no solutions.

(From Unit 3, Lesson 7.)

4. Determine the number of real solutions and non-real solutions to each equation. Use the graphs; don't do any calculations to find the solutions.

a. $x^2 - 6x + 7 = 0$

b. $3x^2 + 2x + 1 = 0$

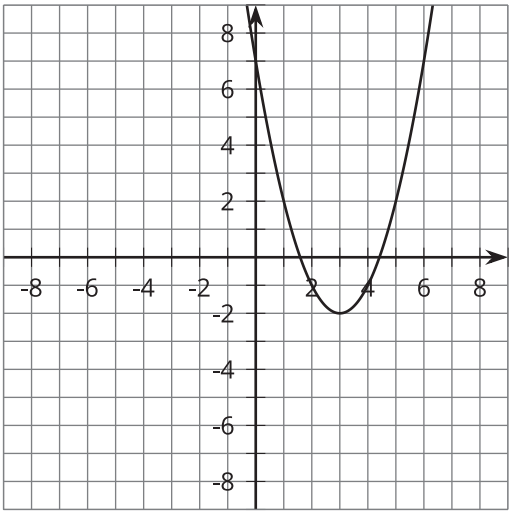
c. $-x^2 - 3x + 2 = 0$

d. $x^2 - 6x + 7 = -2$

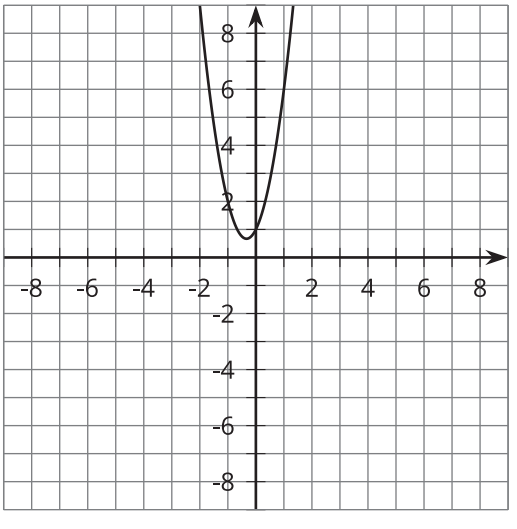
e. $-x^2 - 3x + 2 = 6$

f. $3x^2 + 2x + 1 = 2$

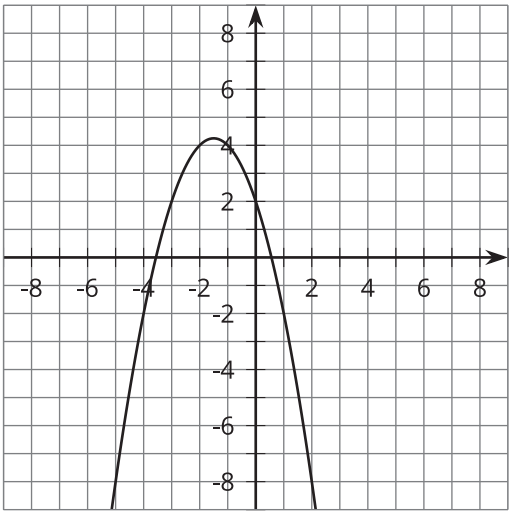
$y = x^2 - 6x + 7$



$y = 3x^2 + 2x + 1$



$y = -x^2 - 3x + 2$



5. a. Write $(5-5i)^2$ in the form $a+bi$, where a and b are real numbers.

b. Write $(5-5i)^4$ in the form $a+bi$, where a and b are real numbers.

(From Unit 3, Lesson 14.)

6. What number n makes this equation true?

$x^2+11x+\frac{121}{4}=(x+n)^2$

A. $\frac{11}{4}$

B. $\frac{11}{2}$

C. 11

D. $\frac{121}{4}$

(From Unit 3, Lesson 16.)