Assignment #5.7c   Name_____
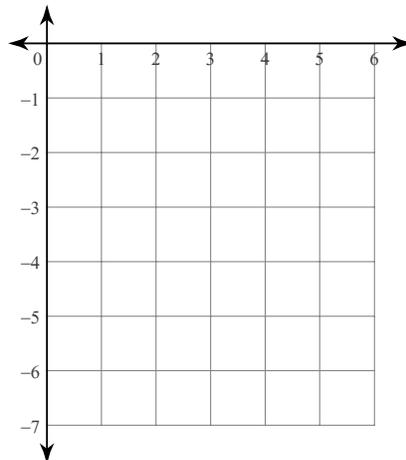
Chapter 5 Review Worksheet   Date_____ Period_____

Sketch the graph of each function.
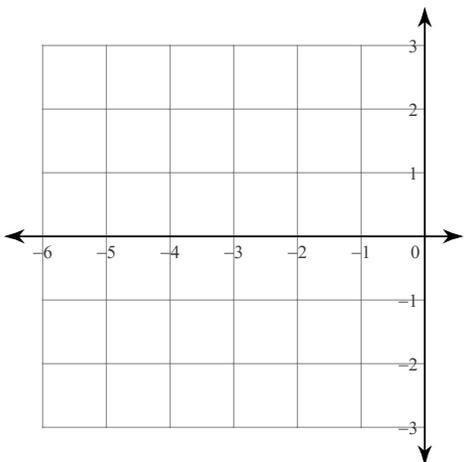
1) $y \geq -(x + 1)^2 + 1$
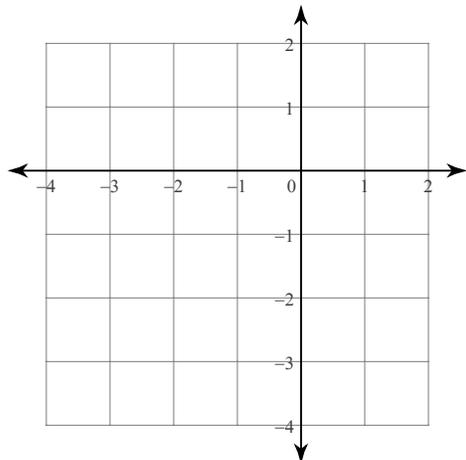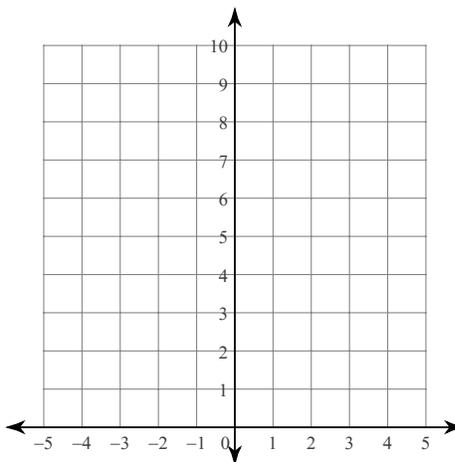

2) $y < -(x - 3)^2 - 2$

3) $y > -x^2 - 4x - 2$

4) $y \geq 2x^2 + 4x + 3$

5) Sketch the graph of each function.

$$y > 2(x + 2)(x - 2)$$

6) Sketch the graph of each function.

$$y < -(x + 3)(x - 1)$$

Factor each completely.

7) $25x^2 - 1$

8) $r^2 - 9$

Solve each equation by factoring.

9) $5n^2 = 7 + 34n$

10) $3x^2 = -8x + 35$

11) Solve by factoring.

$$5x^2 - 25x = 0$$

12) Solve by factoring.

$$x^2 - 16x = 0$$

Simplify.

13) $\dfrac{-3 + 6i}{-4 + 6i}$

14) $\dfrac{-4 + i}{3 - 10i}$

15) $8 - 5 - (-4 + 5i)$

16) $5 + (8i) + (-4 - 3i)$
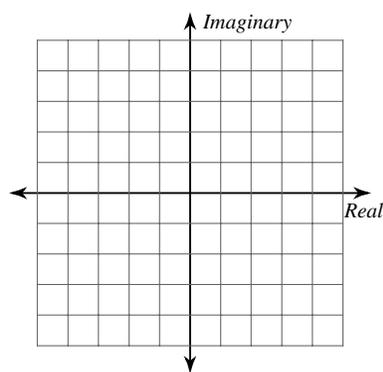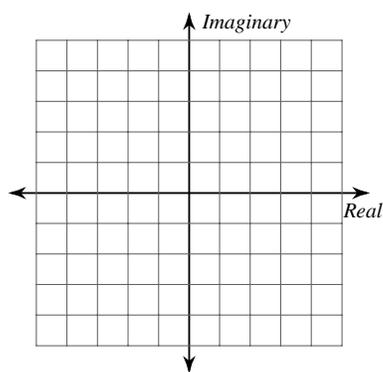
Find the absolute value of each complex number.

17) $|3 - 4i|$

18) $|5 - 5i|$

Graph each number in the complex plane.

19) $3 + 5i$

20) $4i$

Solve each equation by taking square roots.

21) $36b^2 = 49$

22) $n^2 + 9 = 25$

23) Solve by any method.
$13(x + 5)^2 = 9$

24) Solve by any method.
$5(x - 3)^2 = 125$

Solve each equation by completing the square.

25) $a^2 - 18a + 77 = 0$

26) $n^2 - 12n + 35 = 0$

27) $3p^2 + 6p - 23 = 0$

28) $8k^2 - 16k + 43 = 0$

Solve each equation with the quadratic formula.

29) $2x^2 = 3 + 5x$

30) $6n^2 + 10 = -6n$

Find the discriminant of each quadratic equation then state the number and type of solutions.

31) $-8r^2 - 9r - 11 = -3$

32) $m^2 - 6m + 7 = -2$

33) Solve the inequality graphically.
$x^2 - 5x + 4 > 0$

34) Write the quadratic function in vertex from
and identify the vertex.
$y = x^2 - 8x + 3$

35) Write a quadratic function in intercept form whose graph has the given x-intercepts and passes through the given point.
x-intercepts: -4, 7
point: (2,15)