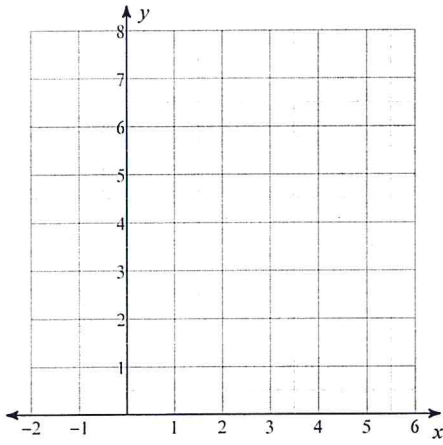


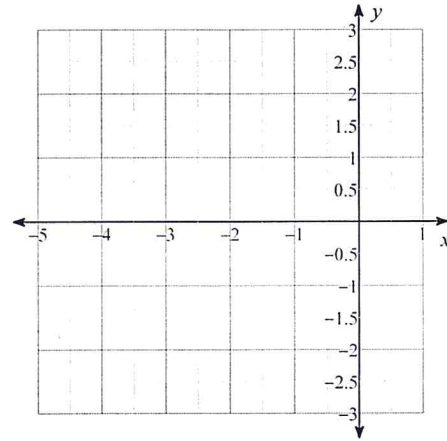
Chapter 5 Review

Sketch the graph of each function.

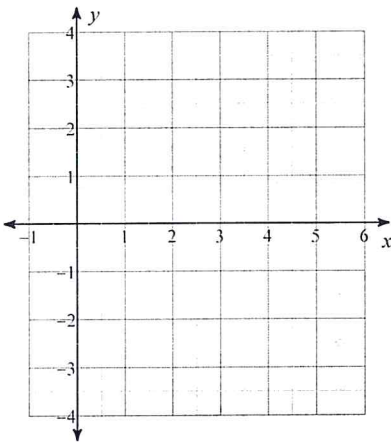
1) $y = (x - 2)^2 + 3$



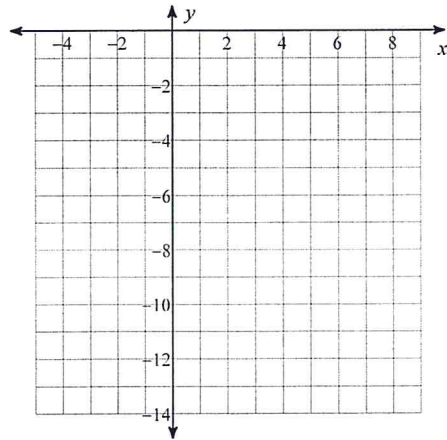
2) $y = (x + 1)^2 - 2$



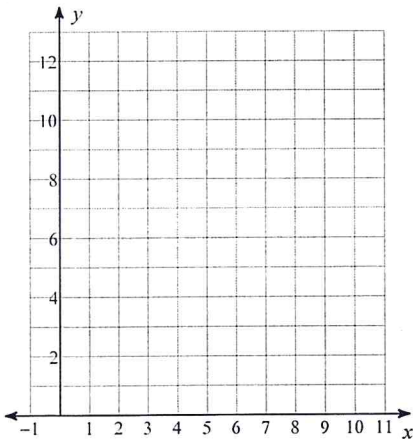
3) $y = \frac{1}{2}x^2 - 4x + 7$



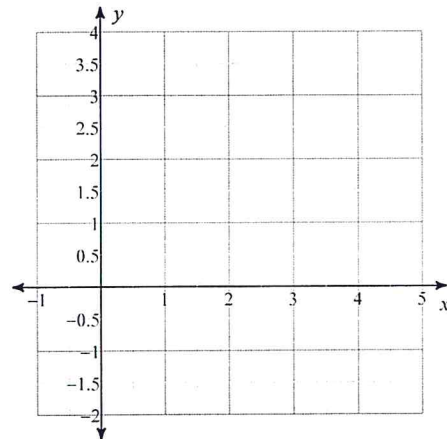
4) $y = -3x^2 + 6x - 4$



5) $y = 2x^2 - 8x + 12$



6) $y = -x^2 + 4x - 1$



Solve each equation by taking square roots.

7) $5 - 9b^2 = -103$

8) $3 - 6k^2 = -591$

9) $9n^2 + 8 = 224$

10) $6v^2 - 6 = 66$

Solve each equation by completing the square.

11) $m^2 - 6m + 61 = -3$

12) $x^2 - 16x - 53 = 4$

13) $b^2 + 20b + 68 = 4$

14) $m^2 + 14m + 34 = -2$

Solve each equation by factoring.

15) $196n^2 + 168n = -20$

16) $2n^2 - 15n = -18$

17) $40n^2 - 256n = 168$

18) $42x^2 + 30 = 72x$

19) $30x^2 + 25x = -5$

20) $3v^2 + 19v = -20$

Solve each equation with the quadratic formula.

21) $r^2 - 2r = 9$

22) $12x^2 = -11 + 4x$

23) $m^2 + m = -1$

24) $5a^2 + 3 = 5a$

Simplify.

25) $(-4 + 6i)(7 - 3i)$

26) $-5(-2 - 7i) + 2(9 - 4i)$

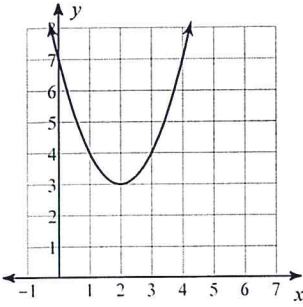
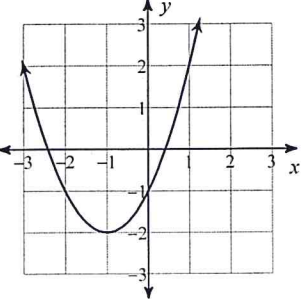
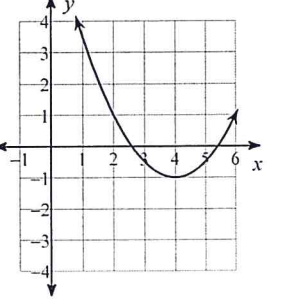
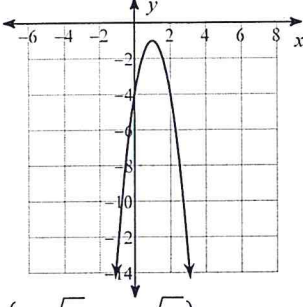
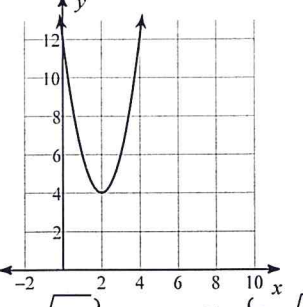
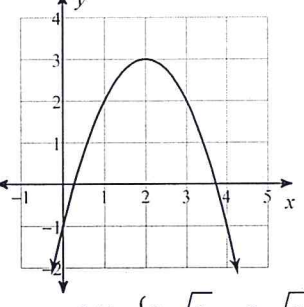
27) $(-2 + 10i) - (-7 - 2i)$

28) $(5 - 9i) + (-3 - 2i)$

29) $(-3 - 3i)(8 - i)$

30) $(9 - 4i) - (5 + 4i)$

Answers to Chapter 5 Review

- 1) 
- 2) 
- 3) 
- 4) 
- 5) 
- 6) 
- 7) $\{2\sqrt{3}, -2\sqrt{3}\}$ 8) $\{3\sqrt{11}, -3\sqrt{11}\}$ 9) $\{2\sqrt{6}, -2\sqrt{6}\}$ 10) $\{2\sqrt{3}, -2\sqrt{3}\}$
- 11) $\{3 + i\sqrt{55}, 3 - i\sqrt{55}\}$ 12) $\{19, -3\}$ 13) $\{-4, -16\}$
- 14) $\{-7 + \sqrt{13}, -7 - \sqrt{13}\}$ 15) $\{-\frac{5}{7}, -\frac{1}{7}\}$ 16) $\{\frac{3}{2}, 6\}$
- 17) $\{-\frac{3}{5}, 7\}$ 18) $\{\frac{5}{7}, 1\}$ 19) $\{-\frac{1}{2}, -\frac{1}{3}\}$ 20) $\{-\frac{4}{3}, -5\}$
- 21) $\{1 + \sqrt{10}, 1 - \sqrt{10}\}$ 22) $\{\frac{1 + 4i\sqrt{2}}{6}, \frac{1 - 4i\sqrt{2}}{6}\}$ 23) $\{\frac{-1 + i\sqrt{3}}{2}, \frac{-1 - i\sqrt{3}}{2}\}$
- 24) $\{\frac{5 + i\sqrt{35}}{10}, \frac{5 - i\sqrt{35}}{10}\}$ 25) $-10 + 54i$ 26) $28 + 27i$
- 27) $5 + 12i$ 28) $2 - 11i$ 29) $-27 - 21i$ 30) $4 - 8i$