x^2y	$2x^2 + 4xy$
xy^2	$2y^2 + 4xy$

2. $2y^2 + 12xy$
3. $4xy + 6x^2$
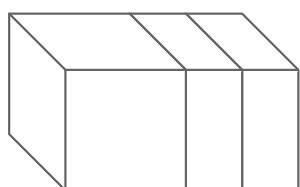**4.** $8y^2 + 4x^2 + 2xy$
5. $2y^2 + 8xy$

Activity 2.2C (p. 28)
1. $4y^2 + 4y + 16x + 4xy - 8$
2. $6y^2 + 10y + 50$
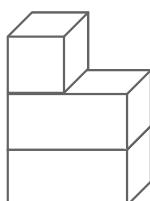**3.** Answers may vary.
4. Answers may vary.
   a.
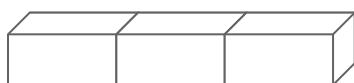
   b.

   c.

Activity 2.3A (p. 31)
1. b.

Figure #	Perimeter
1	14
2	16
3	18
4	20
10	32
100	212

   c. Possible answer: Perimeter equals 2 times the sequence of the figure plus 12.

2. b.

Figure #	Perimeter
1	8
2	14
3	20

4	26
10	62
100	602

   c. Possible answer: Perimeter equals 6 times the sequence of the figure plus 2.

3. b.

Figure #	Perimeter
1	$2x + 4$
2	$2x + 6$
3	$2x + 8$
4	$2x + 10$
10	$2x + 22$
100	$2x + 202$

   c. Possible answer: Perimeter equals $2x$ plus the sequence of the figure times 2 plus 2.

Activity 2.3B (p. 32)
1. b.

Figure #	Surface Area
1	10
2	16
3	22
4	28
10	64
100	604

   c. Possible answer: Surface area equals 6 times the sequence of the figure plus 4.

2. b.

Figure #	Surface Area
1	14
2	26
3	38
4	50
10	122
100	1202

   c. Possible answer: Surface area equals 12 times the sequence of the figure plus 2.

3.

Figure #	Surface Area
1	$2x^2 + 4x$
2	$2x^2 + 8x$

3	$2x^2 + 12x$
4	$2x^2 + 16x$
10	$2x^2 + 40x$
100	$2x^2 + 400x$

   c. Possible answer: Surface area equals $2x^2$ plus the sequence of the figure plus times $4x$.

Section 3

Activity 3.1A (p. 38)
1. $x(x + 3)$
2. $5(x + y)$
3. $3(y + 2x)$
4. $2(2x + 3 + y)$
5. $x(y + x + 2)$
6. $4(y + 2x + 5)$

Activity 3.1B (p. 39)
1. $2(2)(y + 1)$
2. $2y(x + 1)$
3. $2(3)(y + 3)$
4. $2(x)(y + 1 + x)$
5. $2(x)(2x + 4)$ or $4(x)(x + 2)$

Activity 3.1C (p. 40)
1. $x(y)(x + 4)$
2. $x(x)(x + 5)$
3. $x(x + y)(y + 1)$
4. $y(y + x)(y + x)$
5. $x(2y)(y + x) = y(2x)(y + x) = x(y)(2x + 2y)$

Activity 3.1D (p. 41)
1. $2xy + 2x$
2. $xy + 5y$
3. $x^2 + 7x + 10$
4. $xy + x^2 + 4x + 3y + 3$
5. $9x + 3x^2$
6. $2xy + 3x^2 + 5x$
7. $x^2 + 5x + 4$
8. $y^2 + 10y + 25$
9. $xy + 6x + 2y + 12$
10. $2x^2 + 7x + 6$

Activity 3.1E (p. 42)
1. $3xy^2$
2. $2x^2y + 2xy$
3. $9x + 3x^2 + 3xy + x^2y$
4. $y^3 + x^2y + 2xy^2 + y^2 + xy$
5. $y^3 + 2y^2 + y$
6. $x^3 + 2x^2 + 2xy + 2x^2y + xy^2$
7. $x^3 + 6x^2 + 11x + 6$

Activity 3.2A (p. 46)
1. $5y^2 + 20y$