Chapter 9 BLM Answers

BLM 9–2 Chapter 9 Prerequisite Skills

1. a) $y = 2x + 5$ **b)** $y = \frac{2}{5}x - \frac{7}{5}$ **c)** $y = 4x + 3$

2. Example: $2c + 10$. Let c represent Carole's age.

3. a) 9 **b)** Let n represent the term number. $2n - 1$

4. a)

Term Number	1	2	3
Number of Squares	3	5	7

b) Example: Continue the pattern in the chart, drawing the additional diagrams needed, or develop a formula to represent the pattern and use the formula to calculate the number of squares. **c)** $2t + 1$

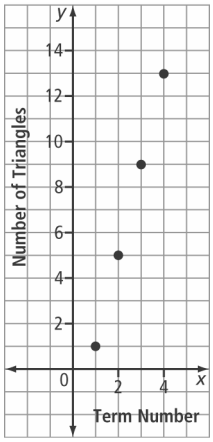
5. a) $t - 5$ **b)** Example: Let the original number of almonds in the bowl be n. $n + 12$ **c)** Example: Let your age be x. Your brother's age is $\frac{1}{2}x + 10$.

6.

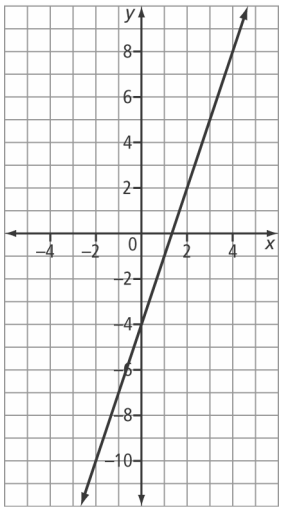
Term Number	1	2	3	8
Number of Squares	8	12	16	36

7. a) $4x - 3$

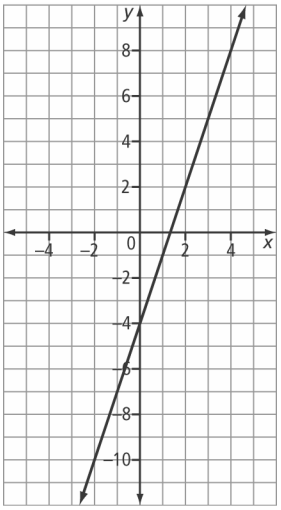
b)



8. a)



b) Example: No, the graph would not change, because the relationship between the variables has not changed. **c)** Example: No



d) No **e)** Example: When you multiply or divide both sides of an equation by the same value (other than zero), the line does not change.

9. a) $c = 40$ cm **b)** $c = 27.5$ cm **c)** Yes. Example: Substitute 600 for m to get $c = 20$. This means that the ground clearance is 20 cm. Because the curb is only 18 cm high, the bumper will clear it. **d)** 1000 kg

BLM 9–3 Chapter 9 Warm-Up

Section 9.1

1. the number of students who attended and the number of adults who attended

2. the cost to take a car on the ferry and the cost for an adult to ride the ferry

3. a) $y = \frac{2}{3}x - 4$ **b)** $y = -\frac{5}{2}x - 10$

4. a) $x = 1$ **b)** $y = \frac{3}{2}$

5. a) $-\frac{1}{2}x + \frac{31}{2}$ **b)** $2y - \frac{6}{5}x - 7$

Section 9.2

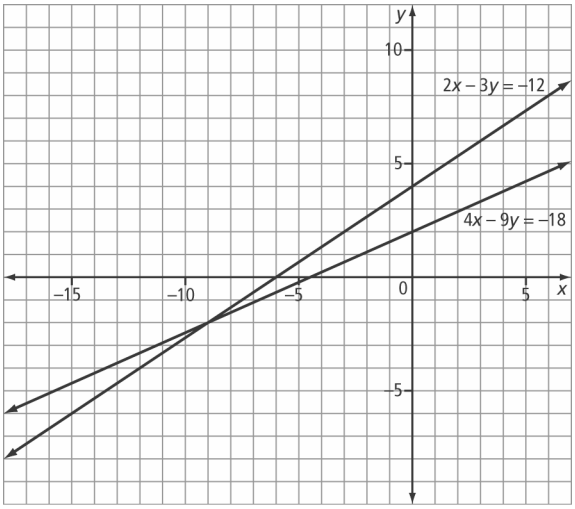
1. Let s represent the number of students attending and let a represent the number of adults attending. $s + a = 100$ and $2s + 5a = 520$

2. Let m represent the number of muffins sold and let y represent the number of yogurts sold. $m + y = 160$ and $1.5m + 2y = 273.50$

3. a) $l = 2w - 1$ **b)** $w = 5 + \frac{1}{2}l$ **c)** $2l + 2w = 24$

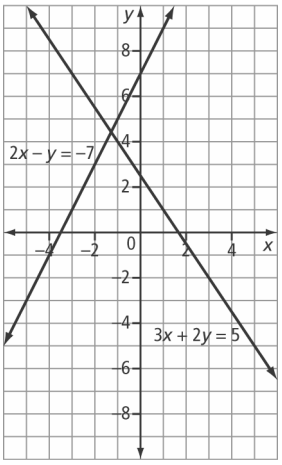
4. a) $8x - 3y$ **b)** $-20c - 10w$
5. a) $-2x - 7y$ **b)** $100c + 110w$

Section 9.3
1.



(–9, –2)
2. $x = 1$ and $y = 1$ **3.** $y = 2$ and $x = 1$
4. $x = 1$ and $y = 2$ **5.** A

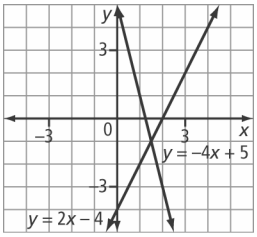
BLM 9–5 Section 9.1 Extra Practice
1. a) $x = -1$ and $y = 5$ **b)** $x = -2$ and $y = 9$
c) $x = -1$ and $y = -3$
2. a) $x = 3$ and $y = 6$ **b)** $x = -2$ and $y = -2$
c) $x = 4$ and $y = 4$
3. a) $x = -5$ and $y = -3$ **b)** $x = -4$ and $y = -15$
c) $x = 4$ and $y = 4$
4. Example: The algebra is easier to do when you isolate y.
5. a) $x = 15$ and $y = 0$ **b)** $x = -50$ and $y = 2000$
c) $x = 6$ and $y = -2$
6. a) $x = -0.5$ and $y = 6$ **b)** $x = 8$ and $y = 6$
c) $x = -15$ and $y = 9$
7. a)



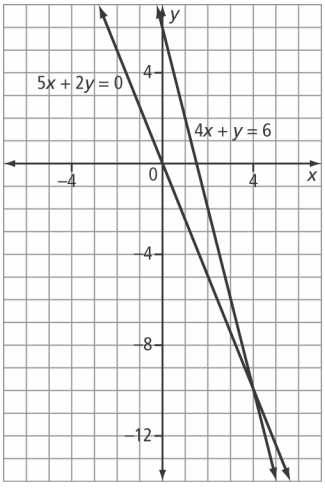
Approximate solution: (–1.25, 4.5)
b) $x = -\frac{9}{7}$ and $y = \frac{31}{7}$ **c)** The answers are approximately the same, but the algebraic method gives the exact value.
8. \$1.80 **9.** 6 cm by 18 cm **10.** 5 and 51

BLM 9–6 Section 9.2 Extra Practice
1. a) $x = 7$ and $y = -3$ **b)** $x = 3$ and $y = 8$
c) $x = 4$ and $y = 6$
2. a) $x = 0$ and $y = \frac{5}{2}$ **b)** $x = 2$ and $y = -4$
c) $x = 4$ and $y = 2$
3. a) $x = 4$ and $y = 7$ **b)** $x = 6$ and $y = \frac{1}{3}$
c) $x = -2$ and $y = 3$
4. a) $x = -2$ and $y = 2$ **b)** $x = -\frac{1}{2}$ and $y = 6$
c) $x = 9$ and $y = -6$
5. a) $x = 3$ and $y = 5$ **b)** $x = -2$ and $y = 5$
c) $x = -1$ and $y = 7$
6. a) no solution **b)** infinite number of solutions
c) no solution
7. 12 and 30 **8.** 5 km/h
9. \$5000 at 6% and \$10 000 at 8%
10. length = 30 m and width = 8 m

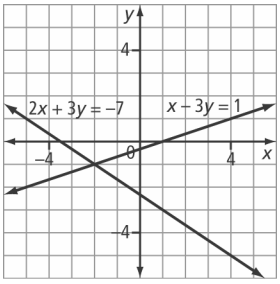
BLM 9–7 Section 9.3 Extra Practice
1. a) $x = \frac{3}{2}$ and $y = -1$



b) $x = 4$ and $y = -10$



c) $x = -2$ and $y = -1$



2. a) $x = -5$ and $y = -7$ **b)** $x = -2$ and $y = 0$
c) $x = -6$ and $y = 12$
3. a) $x = -\frac{1}{6}$ and $y = \frac{1}{5}$ **b)** no solution
c) infinite number of solutions
4. 28° and 62°
5. child: \$8; adult: \$15
6. The father is 40 years old and the daughter is 10 years old.
7. 40 kg of cashews and 60 kg of walnuts
8. $x = 12$ and $y = 8$

BLM 9–8 Chapter 9 Test
1. C **2.** B **3.** A **4.** D
5. 4 **6.** 2 **7.** 350
8. a) Example: Substitution, because it is easy to isolate y in the first equation
b) Example: Elimination, because isolating a variable in either equation creates numbers that are difficult to work with

9. a) $r = -3$ and $s = \frac{3}{2}$ **b)** $x = \frac{1}{2}$ and $y = 2$

10. a) $x = \frac{1}{5}$ and $y = -\frac{7}{2}$ **b)** $x = 4$ and $y = -6$

11. a) $W = 50 + 0.75T$ and $W = 65 + 0.25T$**,** where W represents the total amount earned by either Matt or Rebecca, and T represents the total amount in tips collected. \$30 **b)** \$72.50
12. apple: 90 g; pear: 360 g