

# BLM Answers

## BLM 4. GR. 1: Get Ready

### Working With Fractions

1. a) 20      b) 18      c) 6  
d) 28      e) 12      f) 15

### Operations With Integers

2. a) 4      b) -4      c) -9  
d) 1      e) 6      f) -30

### Simplifying Algebraic Expressions

3. a)  $-4v + u + -3uv$       b)  $-ab$   
c)  $6yz - 3z + xy$       d)  $-s - 3st$   
e)  $-2x + 5xy - y$       f)  $z + 2y - 5x$   
4. a)  $2x + 4$       b)  $10r - 11$       c)  $-9m - 15$   
d)  $5x + 1$       e)  $-5m + 13$       f)  $4xy - x$

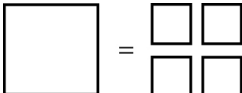
### Evaluating Expressions

5. a) -10      b) -32      c) -1  
d) 2      e) 3      f) -8

### Modelling Equations With Algebra Tiles

6. Use algebra tiles to model each equation.

a) 

b) 

7. a)  $-2x + 2 = -4$       b)  $x = -8$

## BLM 4.1.1: Solve One- and Two-Step Linear Equations

1. Identify the operation, addition, subtraction, multiplication, or division, is required to undo the operation in each linear equation.  
a) division      b) subtraction  
c) addition      d) addition  
e) multiplication      f) subtraction  
2. a)  $x = 9$       b)  $m = 3$       c)  $n = 3$   
d)  $s = 11$       e)  $r = 20$       f)  $y = -3$   
3. a)  $x = -5$       b)  $y = 12$       c)  $r = 9$   
d)  $m = 0.6$       e)  $t = -3$       f)  $n = -6$   
4. a)  $x = -4$       b)  $y = -81$       c)  $x = 5$   
d)  $m = 12$       e)  $t = -1$       f)  $n = 1$   
5. a) add 10 to both sides, divide by 2  
b) subtract 6 from both sides, multiply both sides by 5  
c) subtract 3 from both sides, divide by 2  
d) add 2 to both sides, divide by 3  
e) add 5 to both sides, divide by 3  
f) add 1 to both sides, divide by 5  
6. a)  $x = -3$       b)  $y = 1$       c)  $z = 6$   
d)  $m = -8$       e)  $t = 7$       f)  $r = 8$

7. a)  $C = 0.75M$       b)  $C = \$7.50$   
c)  $9.75 = 0.75M$ , so  $M = 13$   
d)  $C = 2(0.75M) = 1.5M$   
8. a)  $y = 150x + 150$  or  $y = 150(x + 1)$   
b)  $m$  is the slope or rate of change (\$150 increase each month), while  $b$  is the starting account balance \$150.  
c) \$1650      d) 19 months

## BLM 4.2.1: Solve Multi-Step Linear Equations

1. a) Add 20 to each side, divide by 5 on each side  
b) Subtract 1 from each side, divide by -1 on both sides  
c) Add 3 to both sides, multiply by 5  
d) Add 1 to each side, divide by 4  
e) Add 4 to both sides  
f) Divide by 2, add 1 to both sides  
2. a)  $x = 13$       b)  $r = -1$       c)  $m = 40$   
d)  $z = 2$       e)  $t = 4$       f)  $n = -2$   
3. a)  $x = 15$       b)  $y = 3$       c)  $r = 10$   
d)  $z = 2$       e)  $m = 1$   
4. a)  $z = \frac{2}{3}$       b)  $m = -9$       c)  $x = 12$   
d)  $y = 3$       e)  $r = -1$   
5. a)  $a = 1$       b)  $k = -9$       c)  $x = 3$       d)  $y = -35$   
6. a) \$483.75      b) \$562.50      c) 40 years  
7. a) \$1440      b) \$1200      c) 240 hours

## BLM 4.3.1: Model With Formulas

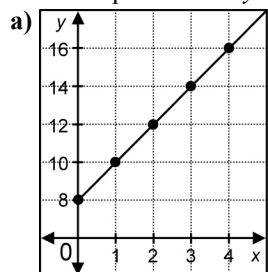
1. a)  $y = \frac{x}{3} + 1$       b)  $b = 5 - a$   
c)  $n = -m + 1$       d)  $v = -\frac{u}{3} + \frac{1}{3}$   
e)  $y = -\frac{1}{2} + 2x$   
2. a)  $y = \frac{x}{2} + \frac{z}{2}$       b)  $b = -a + 2c$   
c)  $n = m - p - 2$       d)  $v = \frac{t}{2} - \frac{u}{2} + \frac{1}{2}$   
e)  $z = 1 - x + y$   
3. a) 5 m/s      b) 900 m      c) 300 s  
4. a)  $C = 70n + (0.06 \times 70)n$   
 $n = 1, C = \$74.20$   
 $n = 2, C = \$148.4$   
 $n = 3, C = \$222.60$   
 $n = 4, C = \$296.80$   
 $n = 5, C = \$371$   
b) \$742  
5. \$368.42  
6. Ben is swimming at 7.5 m/min. Ted is swimming at 17.5 m/min.  
7. Kat's train is moving at 90 km/h. Aaron's train is moving at 110 km/h.

# BLM Answers

## BLM 4.4.1: Convert Linear Equations From Standard Form

- $y = -4x + 2$
  - $y = 3x + 3$
  - $y = 2x + 3$
  - $y = -5x - 4$
  - $y = -x - 1$
- $y = 2x - 1$   
 $m = 2$   
 $b = -1$
  - $y = -x - 5$   
 $m = -1$   
 $b = -5$
  - $y = 2x + 3$   
 $m = 2$   
 $b = 3$
- $y = 3x - 2$   
 $m = 3$   
 $b = -2$
  - $y = -x$   
 $m = -1$   
 $b = 0$
- $y = x + 3$   
 $m = 1$   
 $b = 3$
  - $y = -x + 2$   
 $m = -1$   
 $b = 2$
  - $y = -x - 2$   
 $m = -1$   
 $b = -2$
- $y = x - 1$   
 $m = 1$   
 $b = 1$
  - $y = x$   
 $m = 1$   
 $b = 0$
- $y = -2x + 4$
  - $y = -4x - 3$
  - $y = -4$
  - $y = -x$
  - $y = -3x + 2$

5. For the equation  $2x - y + 8 = 0$ ,



- $m = 2, b = 8$
  - $y = 2x + 8$
- 44
  - $-\frac{2}{3}$
  - $T = 5C + 10A$
    - \$800
    - 200
    - 225

## BLM 4.CR.1: Chapter 4 Review

### 4.1 Solve One- and Two-Step Linear Equations

- division
  - addition
  - multiplication
- $x = 22$
  - $z = -10$
  - $a = 11$
  - $s = 11$
  - $r = 48$
  - $y = -1$
- $x = -4$
  - $y = -45$
  - $n = 8$
  - $m = -6$
  - $r = 1$
  - $a = 9$
- $E = 0.55C$
  - \$3.30
  - 15

### 4.2 Solve Multi-Step Linear Equations

- $a = \frac{1}{3}$
  - $b = -6$
  - $a = 0$
  - $y = 3$
  - $t = \frac{2}{3}$

- $a = 8$
  - $k = -\frac{11}{2}$
  - $x = 4$
  - $x = 2$
- \$885
  - \$1087.50
  - 1.48 years

### 4.3 Model With Formulas

- $y = \frac{x}{2} + 1$
  - $n = 1 - \frac{m}{5}$
  - $v = -\frac{u}{3} - \frac{1}{3}$
  - $b = -\frac{a}{3} + \frac{5}{3}$
  - $y = \frac{x}{2} - \frac{1}{2}$
- 5 m/s
  - 3000 m
  - 320 s

### 4.4 Convert Linear Equations From Standard Form

- $y = 2x - 5$
  - $y = x + 1$
  - $y = 4x + 2$
  - $y = -3x - \frac{1}{2}$
  - $y = x + 1$
- 20
- 2

## BLM 4.PT.1: Chapter 4 Practice Test

### Multiple Choice

- C
- B
- B
- B
- A

### Short Response

- $x = -7$
  - $p = -3$
  - $a = 4$
  - $s = 4$
  - $x = 0$
  - $y = -1$
- $r = 19$
  - $k = -22$
  - $x = 8$
  - $x = 7$
- $y = 5x - 7$
  - $y = 2x - 8$
  - $y = -x - 9$
  - $y = -2x - 3$
- 20
- $\frac{3}{2}$

### Extended Response

- $C = 0.25P$
  - \$2.25
  - 9
- 845
  - 1137.50

## BLM 4.CT.1: Chapter 4 Test

### Multiple Choice

- B
- C
- A
- A
- D

### Short Response

- $x = -12$
  - $p = -3$
  - $t = 9$
  - $y = 1$
- $s = 17$
  - $k = -\frac{1}{2}$
  - $x = -10$
  - $x = 0$
- $y = 3x - 4$
  - $y = 9x - 3$
  - $y = x$
  - $y = -2x$
- 22
- 2

### Extended Response

- $C = 0.15G$
  - \$1.35
  - 11
- \$13230
  - \$17325
  - 6.6 years