

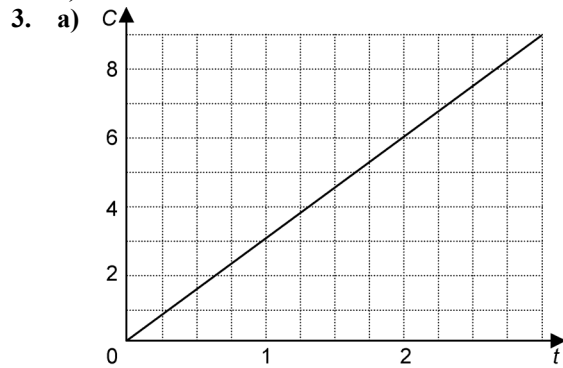
# BLM Answers

## BLM 5.GR.1 Practice: Get Ready

- a) C    b) D    c) A    d) B
- a)  $-\frac{2}{5}$     b)  $\frac{4}{4}$     c)  $-2\frac{1}{8}$
- a) 0.3    b) 0.8    c)  $-0.625$     d)  $-3.20$
- a)  $\frac{3}{4}$     b)  $-\frac{3}{5}$     c)  $-\frac{1}{3}$     d)  $\frac{5}{4}$
- a) 1:4    b) 1:3    c) 7:15    d) 3:4
- 36 g
- \$135
- a) 19%    b) 36.5%    c) 30.3%    d) 19.2%
- a) 1.75    b) 12    c) 6.12    d) 12.8

## BLM 5.1.1 Practice: Direct Variation

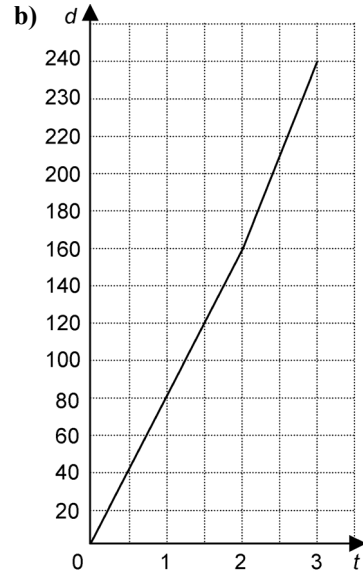
- a) 0.08    b) 0.45    c) 65
- a) 2.30; the cost per metre, in dollars, of wood  
 b)  $C = 2.3P$   
 c) \$34.50



- b) 3.00; the cost per hour to park in this parking lot  
 c)  $C = 3.00t$

4. a)

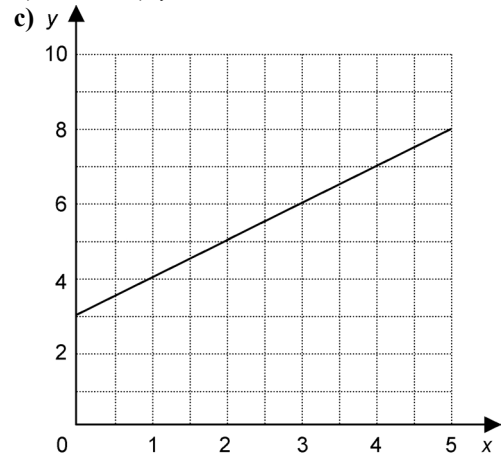
$t$ (h)	$d$ (km)
0	0
1	80
2	160
3	240



- c) 80    d)  $d = 80t$
- a) Tomatoes cost \$2.50 per kg.  
 b)  $C = 2.5m$

## BLM 5.2.1 Practice: Partial Variation

- a) partial variation  
 b) partial variation  
 c) direct variation
- a) partial variation  
 b) direct variation  
 c) direct variation  
 d) partial variation
- a) 3; 1    b)  $y = x + 3$



The graph intersects the y-axis at (0, 3). As the x-values increase by 1, the y-values also increase by 1.

# BLM Answers

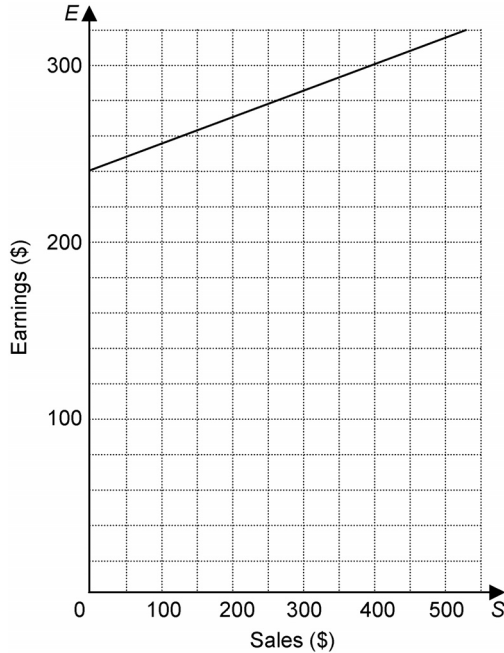
4. a)

Sales (\$)	Earnings (\$)
0	240
100	255
200	270
300	285
400	300
500	315

b) 240; 0.15

c)  $E = 0.15S + 240$

d)



## BLM 5.3.1 Practice: Slope

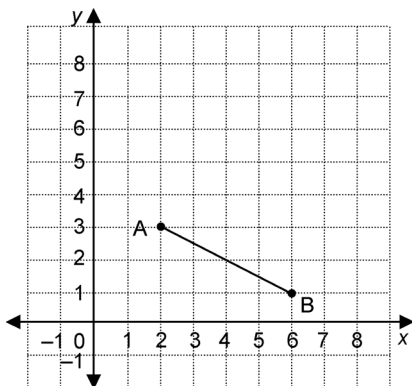
1. a)  $-\frac{2}{5}$  b)  $-0.48$

2. a)  $\frac{5}{6}$  b)  $\frac{1}{3}$  c)  $-\frac{4}{5}$  d)  $-2$

3. a) 0.69 b) Yes

4. a)  $-\frac{1}{5}$  b)  $\frac{1}{2}$  c) 4 d)  $-2$

5. Answer may vary. Possible answer: B(6, 1)



## BLM 5.4.1 Practice: Slope as a Rate of Change

1. 12.4 breaths/min

2. 64 beats/min

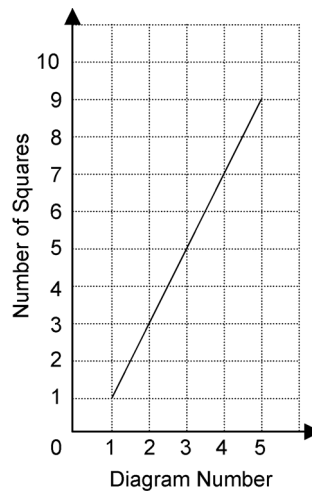
3. 179 km/h

4. a)  $-3.6$

b) Once the brakes are applied, the speed of the cars decreases at a rate of 3.6 m/s.

5. a)

Diagram Number	Number of Squares
1	1
2	3
3	5
4	7
5	9



b) 2

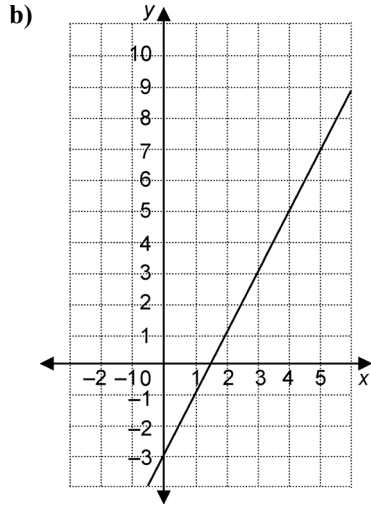
c) Each diagram has two more squares than the previous diagram.

## BLM 5.5.1 Practice: First Differences

1. a, d)

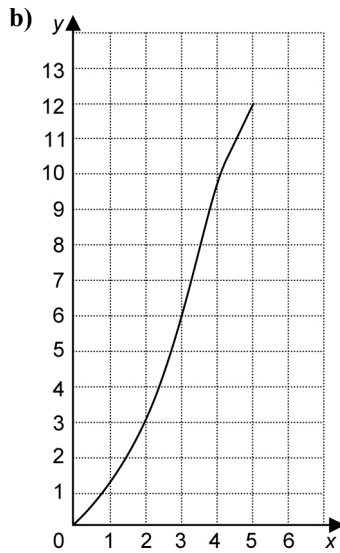
x	y	First Differences
0	-3	
1	-1	2
2	1	2
3	3	2
4	5	2
5	7	2

# BLM Answers



- c) linear  
2. a, d)

x	y	First Differences
0	0	
1	0.5	0.5
2	2	1.5
3	4.5	2.5
4	8	3.5
5	12.5	4.5



- c) non-linear  
3. If the first differences are equal, the relation is linear. If the first differences are not equal, the relation is non-linear.  
4. a)

x	y	First Differences
0	8	
1	10	2
2	13	3
3	17	4

non-linear

b)

x	y	First Differences
0	2	
1	6	4
2	10	4
3	14	4

linear

5. a)

x	y	First Differences
1	2	
2	4	2
3	8	4
4	16	8

non-linear

b)

x	y	First Differences
1	-3	
2	-6	-3
3	-9	-3
4	-12	-3

linear

c)

x	y	First Differences
1	2	
2	3	1
3	4	1
4	5	1

linear

d)

x	y	First Differences
1	2	
2	5	3
3	10	5
4	17	7

non-linear

6. a)  $2b + 4$       b)  $p - 3$   
 c)  $4y + 5$       d)  $-3x + 4$   
 e)  $8a + b$       f)  $9r + 1$   
 g)  $3s + 5t$       h)  $h + g$   
 7. a)  $6v - 6$       b)  $6a - 5b$   
 c)  $7k + 5$       d)  $10x^2 + x$   
 e)  $-3m^2 + 4$       f)  $-5y + 4$   
 g)  $7h + 7$       h)  $6p^2 - 5q^2$   
 8. a)  $3a + 7b - 6$       b)  $9x + xy - 2y$   
 c)  $2m^4 - 3m^2 + 4$       d)  $5xy + y^2$   
 9. a)  $2x$       b)  $P = 6x$       c) 36 cm

# BLM Answers

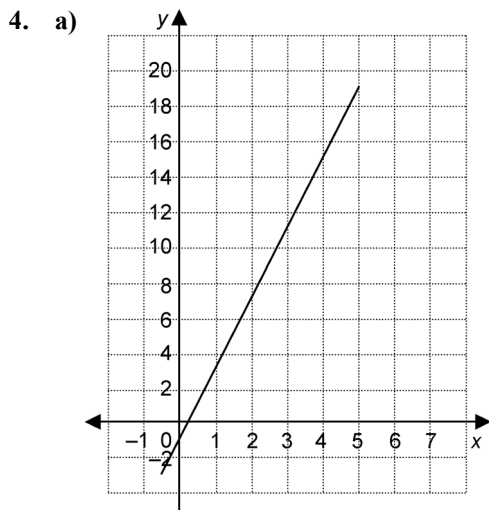
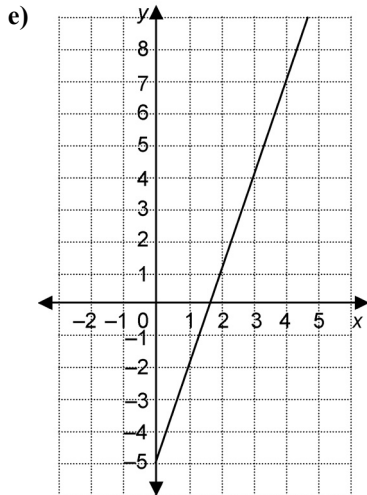
## BLM 5.6.1 Practice: Connecting Variation, Slope, and First Differences

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

2. a)  $\frac{1}{2}$     b) -2    c)  $y = \frac{1}{2}x - 2$

3. a) partial variation  
 b) -5  
 c) 3  
 d)

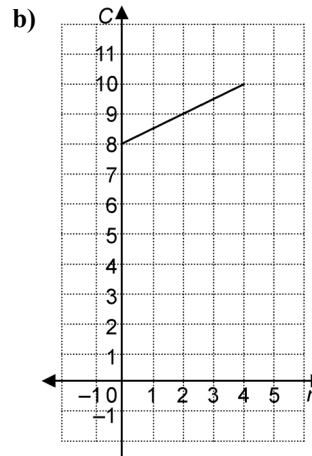
x	y
0	-5
1	-2
2	1
3	4
4	7



- b) The relationship between  $x$  and  $y$  is a partial variation. The initial value is -1 and the constant of variation is 4.  
 c) -1; 4;  $y = 4x - 1$

5. a)

Number of Toppings, $n$	Cost (\$), $C$
0	8.00
1	8.50
2	9.00
3	9.50
4	10.00



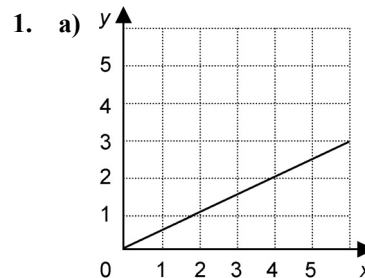
c)  $C = 0.50n + 8.00$

6.  $y$  varies partially with  $x$ , the initial value is -2 and the constant of variation is  $-\frac{3}{4}$

x	y
-4	1
0	-2
4	-5

$y = -\frac{3}{4}x - 2$

## BLM 5.CR.1 Chapter 5 Review

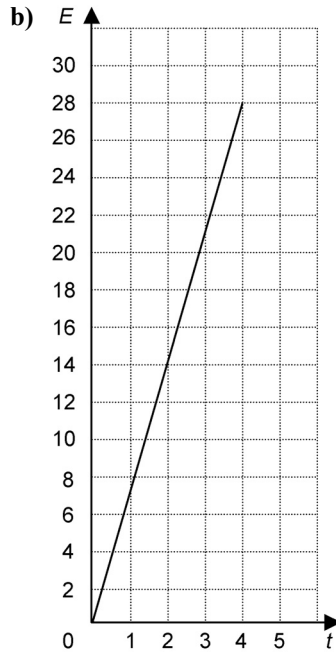


b)  $\frac{1}{2}$     c)  $y = \frac{1}{2}x$

2. a)

Time, $t$	Earnings, $E$
0	0
1	7
2	14
3	21
4	28

# BLM Answers



c) 7; the amount Evan earns each hour he babysits

d)  $y = 7x$

3. a) direct variation

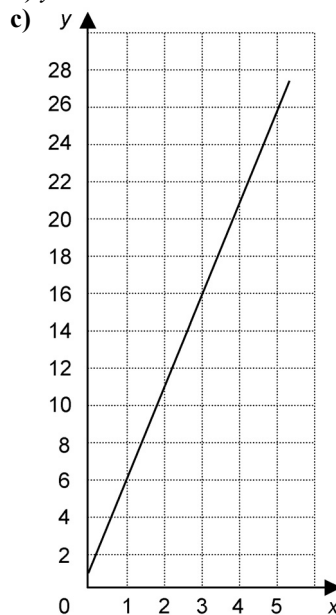
b) neither

c) partial variation

d) partial variation

4. a) 1; 5

b)  $y = 5x + 1$



The graph intersects the y-axis at (0, 1).

As the x-values increase by 1, the y-values increase by 5.

5. a) fixed cost: \$1500

variable cost: \$0.08 times the number of brochures

b)  $C = 0.08n + 1500$

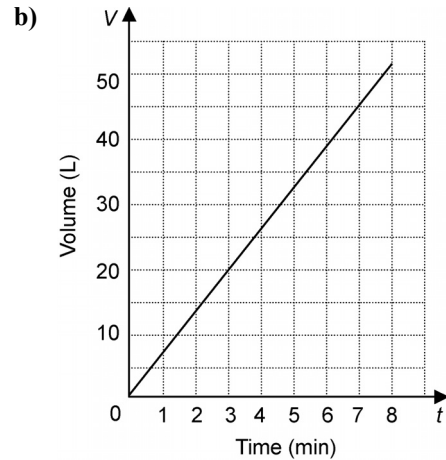
c) \$1564

6. a)  $-\frac{2}{5}$     b) 5

7. a)  $\frac{5}{6}$     b)  $-\frac{3}{7}$     c)  $\frac{3}{10}$

8. Answers may vary. Possible answer: B(6, 6)

9. a) 6.5 L/min



10. Tom; 1 m/s

11. a) linear

b) linear

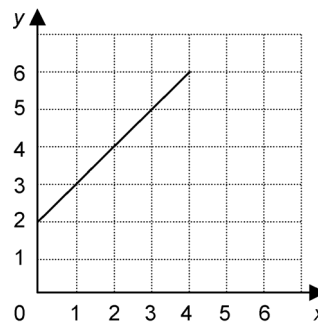
12. a)

Side Length	Perimeter
1	4
2	8
3	12
4	16
5	20

b) linear

13.

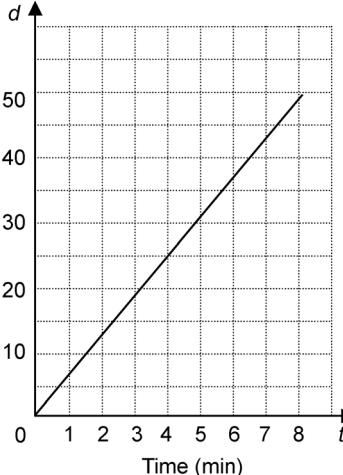
x	y
0	2
1	3
2	4
3	5
4	6



The length of a rectangle is 2 more than its width.

# BLM Answers

## BLM 5.PT.1 Chapter 5 Practice Test

1. D
2. B
3. D
4. C
5. A
6. a)  $-\frac{3}{7}$     b) 6    c)  $y = -\frac{3}{7}x + 6$
7. a)  $d = 6.2t$   
b) 

8. Linear; I found the first differences and noticed they were all equal.
9. a)  $C = 6l + 50$   
b) \$158
10. a) \$0.95/km; the rate of change is the slope  
b)  $C = 0.95d + 2.50$   
c) The fixed portion of the equation would change from 2.50 to 3.00. The graph would shift up so the vertical intercept is 3.

## BLM 5.CT.1 Chapter 5 Test

1. A
2. D
3. B
4. A
5. B
6. a)  $\frac{3}{2}$     b) -3    c)  $y = \frac{3}{2}x - 3$
7.  $C = 0.85m$
8. Non-linear; I found the first differences and noticed they were not equal.
9. a)  $E = 0.15n + 240$     b) \$242.85
10. a) -3 L/min; the rate of change is the slope  
b)  $V = 200 - 3t$   
c) 50 min