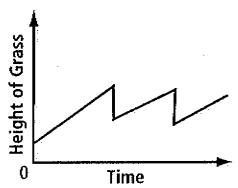
Unit 2 Test, pages 260 to 261

1. D
2. C
3. A
4. D
5. A
6. 12
7. 5
8. 19
9. 4
10. $\frac{1}{20^{\frac{1}{6}}}$
11. **a)** $2x^2 + 9xy - 5y^2$ **b)** $6a^3 - 5a^2 - 20a + 21$
    c) $3x^3 - 7x^2 + 7x + 1$
12. **a)** $(x - 9)(x - 1)$ **b)** $(a - 2)(4a + 3)$
    c) $(4x + y)(4x - y)$
13. **a)** $x^2 - 1$ **b)** $14x^2 + 17x - 3$

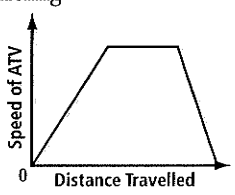
Chapter 6

6.1 Graphs of Relations, pages 274 to 278

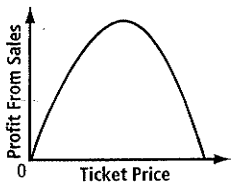
1. AB: There is a constant slow decrease of Quantity B. The segment is falling and shallow.
   BC: Quantity B is not changing, the segment is horizontal.
   CD: Quantity B is decreasing, but not at a constant rate. The curve is initially steep and falling, then becomes less steep as it gradually approaches horizontal.
   DE: Quantity B is increasing, but not at a constant rate. The curve is initially horizontal, then gradually begins to increase until it rises steeply.
   EF: Quantity B is decreasing quickly at a constant rate. The segment is falling and steep.
   FG: There is a constant increase of Quantity B. The segment is rising at approximately 45°.
2. **a)** **i)** A **ii)** C **iii)** D
   b) Example: Graph B: the number of people in a building as they enter the building, watch a concert, and exit the building
3. **a)**



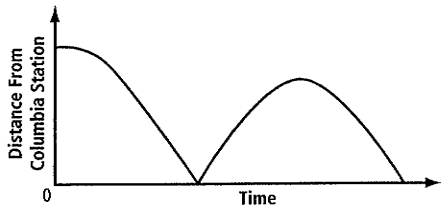
b)



c)

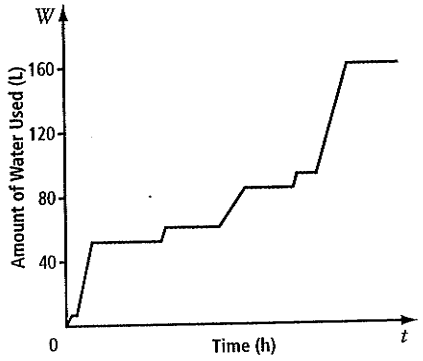


4. Examples:
   a) A jogger jogs home, and then leaves his house walking. The vertical axis is the distance from home, and the horizontal axis is time.
   b) A car slows down to a stop at a stop sign, and then accelerates to a constant speed. The vertical axis is speed, and the horizontal axis is time.
   c) A ball is thrown up and left to bounce on the floor. The vertical axis is height, and the horizontal axis is time.
5. Example:



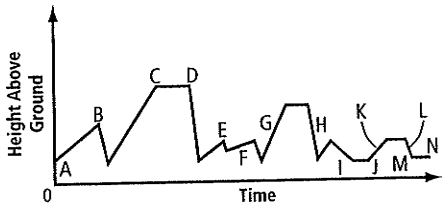
6. Examples: The blue line represents vinyl albums. It is the oldest format, so many units were sold many years ago, but few have been sold for a number of recent years. The red line represents cassette tapes. This format is newer than vinyl albums and was very popular for a while, but in the last few years it has no longer been a viable option. The green line represents compact discs. This format quickly became popular, but has been declining rapidly in popularity. The yellow line represents digital downloads. It is the most recently developed format, and has rapidly become the most popular format.
7. Example: Uriash initially travelled on flat ground at a constant speed. He went up and down a number of slopes travelling away from home. Then, he travelled at a constant speed on flat terrain. Next, he travelled back toward home going up and down slopes. Finally, he returned home on flat terrain at a constant speed.

8. Example: I flushed the toilet and washed my hands. I took a shower. I flushed the toilet and washed my hands. I ran the dishwasher. I flushed the toilet and took a bath.

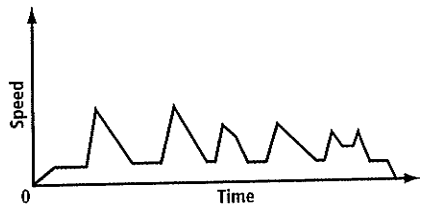


9. Examples:

a)

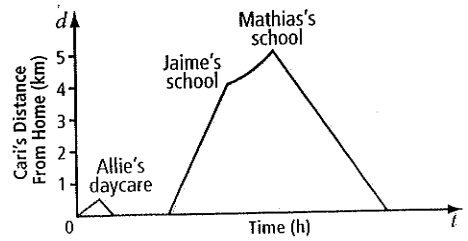


b)

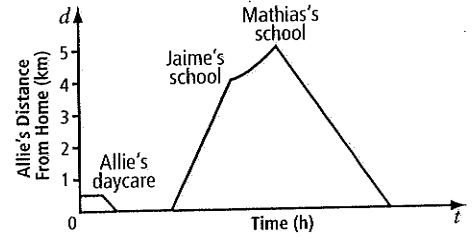


10. Examples:

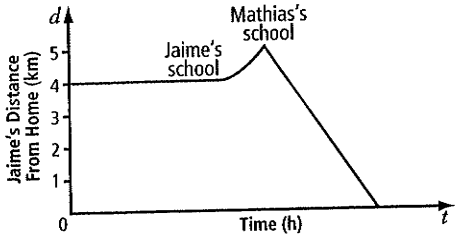
a)



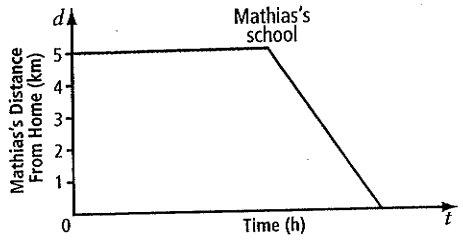
b)



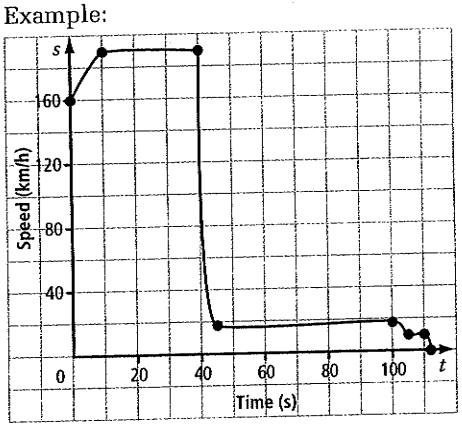
c)



d)



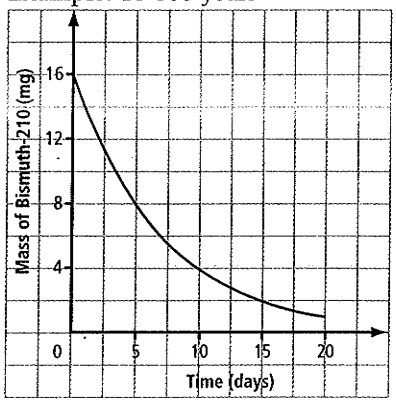
11. Example:



12. Example: Stage 1: The birth and mortality rates are similar, so the total population remains constant. Stage 2: The mortality rate declines rapidly while the birth rate remains nearly constant, so the total population rises at a constant rate. Stage 3: This stage is similar to stage 2. The birth rate is greater than the mortality rate, although the mortality rate begins to approach the birth rate, so the total population increase begins to taper off. Stage 4: The birth and mortality rates become similar, so the total population increase continues to taper off. Stage 5: The mortality rate is greater than the birth rate, so the total population begins to decline.

13. a) Example: 10 000 years

b)



14. The cost is constant up to a certain quantity of time. Example: The cost is \$1 for the first hour, \$2 for between one and two hours, and \$3 for between two and three hours.

15. Examples:

a) Total time passed cannot be taken away.

b) Distance already travelled cannot be taken away.

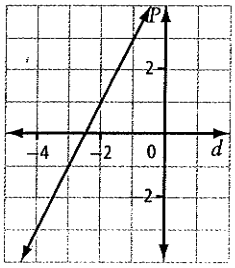
6.2 Linear Relations, pages 287 to 291

1. a) (−2, 5), (−1, 6), (0, 7), (1, 8), (2, 9), (3, 10), (4, 22)

b)

x	y
0	0
1	1 and −1
2	2 and −2
3	3 and −3

c)



d) Each child ate one orange.

2. a) linear; Each integral change in r results in a constant change of 2π in C.

b) non-linear; The degree is 2.

c) linear; An integral change in x results in a constant change in y.

d) non-linear; The values of x increase by greater and greater amounts but the values of y are increasing by the same constant.

e) linear; Each increase of 5 in the value of x results in an increase of 10 in the value of y.

f) linear; Each integral change in the value of x results in a constant change in the value of y.

g) linear; As the values of x increase, the values of y stay the same.

h) non-linear; The relation does not form a straight line.

3. a) dependent variable: A, independent variable: r

b) dependent variable: V, independent variable: t

c) dependent variable: A, independent variable: n

d) dependent variable: profit, independent variable: year

e) dependent variable: e, independent variable: c

4. Graph B. The relation does not have a degree of 1, so it cannot be linear. Only Graph B is non-linear.

5. a) linear; For each additional bushel of wheat sold, the amount of money received goes up by \$6.

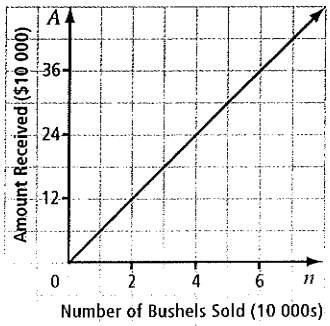
b) The amount of money received, A, is the dependent variable, and the number of bushels sold, n, is the independent variable.

c)

Number of Bushels Sold, n	Amount Received, A (\$)
0	0
10 000	60 000
20 000	120 000
30 000	180 000
40 000	240 000
50 000	300 000

d) discrete; The farmer would not get paid for parts of bushels. However, because a single bushel is such a small unit compared to 10 000 bushel units, the relation would appear to be continuous on a graph drawn to scale.

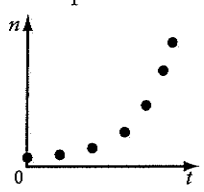
e)



6. a) Example:

x	y
0	0
1	−2
2	2
3	−4
4	4

b) Example:



c) Example: $n = 4m + 1$

7. a) linear; The degree is 1.

b) dependent variable: D, independent variable: d

c) 1.5 m

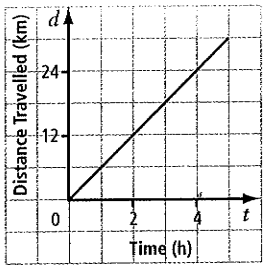
d) Yes. The apparent depth is 2.1 m. The relation is continuous, because fractions of metres are feasible.

8. a) The dependent variable, d, represents the distance travelled, in kilometres. The independent variable, t, represents time, in hours.

b) (0, 0), (1, 6), (2, 12), (3, 18), (4, 24), and (5, 30)

c) continuous; The whale can swim for a fraction of an hour or cover a distance that is a fraction of a kilometre.

d)



e) linear; The change in the distance travelled is constant with a constant change in the time.

9. a)

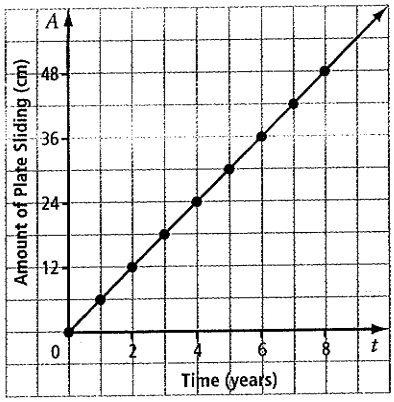
t	A
0	9.0
1	8.2
2	7.4
3	6.6
4	5.8
5	5.0
6	4.2
7	3.4
8	2.6
9	1.8
10	1.0
11	0.2
12	0.0

b) 12 years

10. a) non-linear; As the magnitude changes by one, the difference in size changes by ten times, so the difference in size of the earthquake is not constant.

b) (0, 0), (1, 6), (2, 12), (3, 18), (4, 24), (5, 30), (6, 36), (7, 42), and (8, 48)

c)



Example: Yes, the points should be connected, because fractions of years and fractions of centimetres are logical.

11. a) linear; As the values of x increase by two, the values of y increase by k.

b) linear; As the values of x increase by one, the values of y increase by $3n$.

12. a) Graph A is linear and Graph B is non-linear. In Graph A, the difference between values on the vertical axis is constant. In Graph B, the difference between values on the vertical axis is increasing.

b) For simple interest, the interest calculation is a certain percent of the original amount, so the amount added each year is the same, as shown in Graph A. For compound interest, the interest is added to the amount each year, so the interest earned each year gets larger, as shown in Graph B.

13. Example: I prefer an equation, because it is easy to see whether or not the relation is linear.

14. Example: research on the Internet or interviewing people

6.3 Domain and Range, pages 301 to 304

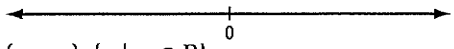
1. a) the real numbers between -8 and 30 inclusive, $[-8, 30]$, $\{n \mid -8 \leq n \leq 30, n \in \mathrm{R}\}$

b) the real numbers less than or equal to 0, $(\infty, 0]$, $\{n \mid n \leq 0, n \in \mathrm{R}\}$

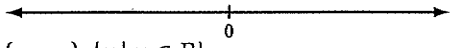
c) all real numbers greater than or equal to -2, $[-2, \infty)$, $\{n \mid n \geq -2, n \in \mathrm{R}\}$

d) the real numbers greater than 50 and less than or equal to 100, $(50, 100]$, $\{n \mid 50 < n \leq 100, n \in \mathrm{R}\}$

2. a) domain: all real numbers

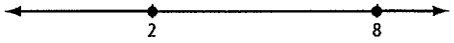


(∞, ∞), $\{x \mid x \in R\}$
range: all real numbers

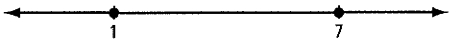


(∞, ∞), $\{y \mid y \in R\}$

b) domain: all real numbers from 2 to 8, inclusive

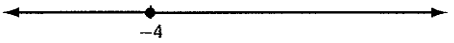


$[2, 8]$, $\{x \mid 2 \leq x \leq 8, x \in R\}$
range: all real numbers from 1 to 7, inclusive

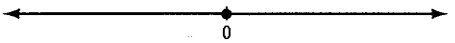


$[1, 7]$, $\{y \mid 1 \leq y \leq 7, y \in R\}$

c) domain: all real numbers greater than or equal to -4

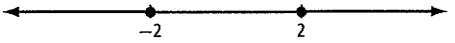


$[-4, \infty)$, $\{x \mid x \geq -4, x \in R\}$
range: all real numbers greater than or equal to 0



$[0, \infty)$, $\{y \mid y \geq 0, y \in R\}$

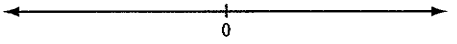
d) domain: all real numbers from -2 to 2, inclusive



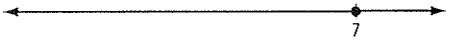
$[-2, 2]$, $\{x \mid -2 \leq x \leq 2, x \in R\}$
range: all real numbers from -5 to -1, inclusive

$[-5, -1]$, $\{y \mid -5 \leq y \leq -1, y \in R\}$

e) domain: all real numbers

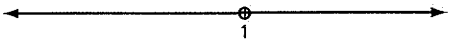


(∞, ∞), $\{x \mid x \in R\}$
range: all real numbers less than and including 7

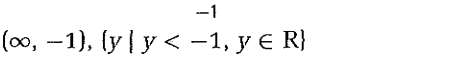


$(\infty, 7]$, $\{y \mid y \leq 7, y \in R\}$

f) domain: all real numbers less than 1



$(\infty, 1)$, $\{x \mid x < 1, x \in R\}$
range: all real numbers less than -1



$(\infty, -1)$, $\{y \mid y < -1, y \in R\}$

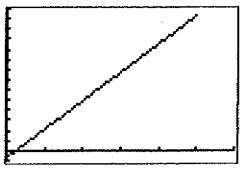
3. a) domain: $\{-4, 0, 1, 2, 3\}$,
range: $\{-1, 0, 1, 4, 5, 6, 7\}$

b) domain: $\{-4, -2, 0, 2, 4, 6\}$, range: $\{5, 7, 9\}$

c) domain: $\{50, 100, 150, 200\}$,
range: $\{10, 20, 30, 40\}$

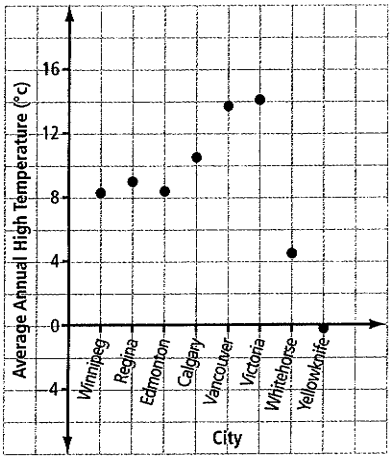
4. a) $[-3.5, 66.5]$

b) Example: Window values: Xmin = 0, Xmax = 30, Ymin = -5, Ymax = 70



5. a) domain: {Winnipeg, Regina, Edmonton, Calgary, Vancouver, Victoria, Whitehorse, Yellowknife}, range: {8.3, 9.1, 8.5, 10.5, 13.7, 14.1, 4.5, −0.2}

b)

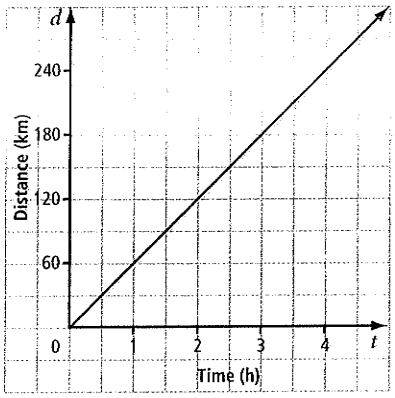


6. a) domain: $[2.5, 11.5]$, range: $[0, 6]$

b) domain: $\{x \mid 1 \leq x \leq 13, x \in R\}$,
range: $\{y \mid 0 \leq y \leq 6, y \in R\}$

c) blue pool: length is 9 m and width is 6 m; red pool: length is 12 m and width is 6 m

7. a)

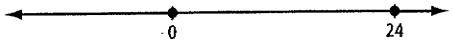


b) Examples: domain: the times between 0 h and approximately 3.22 h, [0, 3.22]; range: the distances between 0 km and 193 km inclusive, [0, 193]

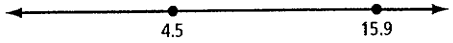
8. a) dependent variable axis label: Water Depth (ft), d;
independent variable axis label: Time (h), t

b) Point A represents the high-tide water depth of 15.9 ft at 12:00 a.m. (0 h) at the beginning of the period, at 12:00 p.m. (12 h) at the middle of the period, and at 12:00 a.m. (24 h) at the end of the period. Point B represents the low-tide water depth of 4.5 ft at 6:00 a.m. (6 h) and at 6:00 p.m. (18 h). Point C is the origin, at the beginning of the time period (0 h). Point D is the end of the period (24 h).

c) domain: the times between 0 h and 24 h, inclusive



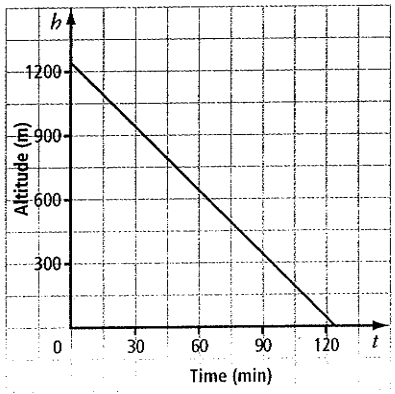
[0, 24], $\{t \mid 0 \leq t \leq 24, t \in \mathrm{R}\}$
range: the water depths between 4.5 ft and 15.9 ft, inclusive



[4.5, 15.9], $\{d \mid 4.5 \leq d \leq 15.9, d \in \mathrm{R}\}$

9. a) 123.6 min

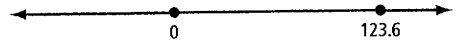
b)



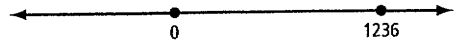
c) Example: No. Once the balloon has landed, the situation of the model changes, causing a restriction on the domain and range.

d) The domain represents the times from when the balloon is at its highest until the balloon reaches the ground. The range represents the heights of the balloon from its highest point to ground level.

e) domain: the times between 0 min and 123.6 min, inclusive



[0, 123.6], $\{t \mid 0 \leq t \leq 123.6, t \in \mathrm{R}\}$
range: the altitudes between 0 m and 1236 m, inclusive



[0, 1236], $\{h \mid 0 \leq h \leq 1236, h \in \mathrm{R}\}$

10. $m = 2$ and $k = 14$

11. domain: [0, 7997.5]; range: [0, 2285]

12. Example: Given pairs of numbers that are related in some way, the domain is all of the possible first numbers of the relation, and the range is all of the possible second numbers of the relation.

13. Example: Hockey teams: The number of teams is the independent variable and the total number of players is the dependent variable. The restrictions are in place because there must be a limited number of teams, and each team has a limit on the number of players it can have.

6.4 Functions, pages 311 to 314

1. a) function; Each value of x has one value of y.

b) function; Each value of x has one value of y.

c) function; Each value of x has one value of y.

d) not a function; The values of x of 1 and 4 each have more than one value of y.

e) function; Each name has one age.

f) function; The graph passes the vertical line test.

g) not a function; There are two values of y associated with $x = -2$.

2. $A(r) = 4\pi r^2$

3. $C = 3n + 50$

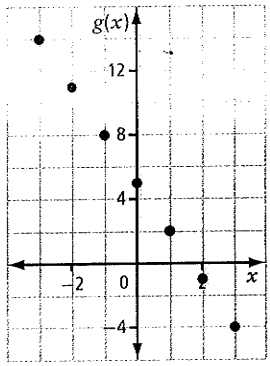
4. a) 12 **b)** −38 **c)** 5

5. a) 7 **b)** −1 **c)** −12

6. a) 2 **b)** 1

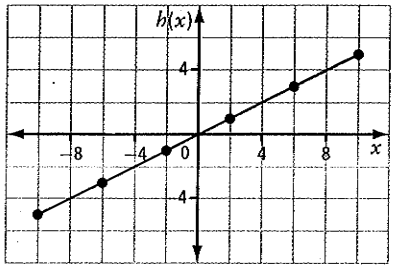
7. a)

x	$g(x)$
−3	14
−2	11
−1	8
0	5
1	2
2	−1
3	−4



b) Example:

x	$h(x)$
−10	−5
−6	−3
−2	−1
2	1
6	3
10	5



8. a) The variable w represents the number of weeks.

b) $M(w)$ is the function that shows the amount that Mike saves each week. $A(w)$ is the function that shows the amount that Ali spends each week.

c) $M(4) = 280$ and $A(4) = 120$; After four weeks, Mike has \$280 and Ali has \$120.

d) $w = 10$; After 10 weeks, Ali will have spent all of her money.

9. a) 177.523 cm

b) 174.636 cm; The function $h(36.87)$ represents the height of a female whose humerus measures 36.87 cm.

c) Example: [100, 230]; It is unlikely that either a man or woman would be shorter than 100 cm or taller than 230 cm.

d) Example: For $h(100)$, the radius bone for men measures approximately 4.1 cm. For $h(230)$, it measures approximately 43.5 cm. So, the domain is [4.1, 43.5]. For women, the radius bone measures approximately 5.7 cm and 45.1 cm. So, the domain is [5.7, 45.1]

e) Example: A male with a radius measuring 29 cm should have a height of 182.1 cm. If his height is 180 cm, the prediction is relatively accurate.

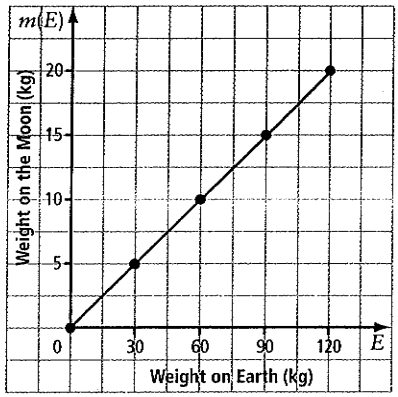
10. a) You would be lighter on the moon, because you divide your Earth weight by six to calculate your weight on the moon.

b) approximately 13.3 kg

c) Example: A person who weighs 90 kg on Earth would weigh 15 kg on the moon.

d) Example: [0, 120]

Weight on Earth (kg)	Weight on the Moon (kg)
0	0
30	5
60	10
90	15
120	20



11. a) 1236 km/h

b) 1071 km/h

c) $M(V) = \frac{V}{1236}$ and $M(V) = \frac{V}{1071}$

d) approximately 1.68

12. a) $f(x) = 3x + 2$

b) Example: $f(x) = 5x - 2$; $f(1) = 3$, $f(-1) = -7$, $f(2) = 8$, and $f(-2) = -12$

13. a) Yes. Each percent of carbon-14 value is paired with only one age value.

b) Example: approximately 90 years; This is the age of the bison bone.

c) Example: These bison bones would have about 50% of their carbon-14 remaining.

14. a) Yes. No value of x has more than one value of y.

b) $f(-4) = 0.5$; $f(1) = 0.5$; $f(3) = 4$; $f(5) = 6$

15. a) $h(4x) = 8x - 5$

b) $h(2x + 3) = 4x + 1$

c) $h\left(\frac{x}{2} - 1\right) = x - 7$

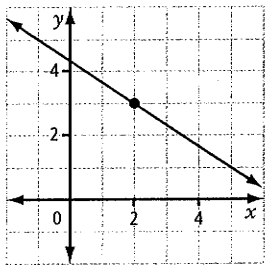
16. Example: Relations are pairs of numbers that are related to each other in some way. Functions are also pairs of numbers that are related, but they cannot be related in such a way that any value of x has more than one value of y (the first number cannot be paired with more than one second number).

17. Example: The expression $f(2)$ means that the value of x is 2. The expression $f(x) = 2$ means that the function value, or value of y, is 2.

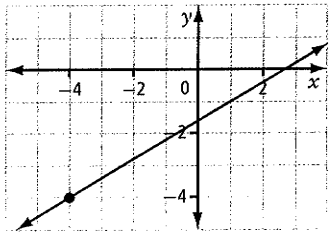
18. Examples:
    a) Jean-Marie is applying the distributive property. He thinks that f is being multiplied by the variable and the constant in the brackets.
    b) The expression $f(x + 2)$ means that for any function $f(x)$, substitute $(x + 2)$ for x.

6.5 Slope, pages 325 to 329

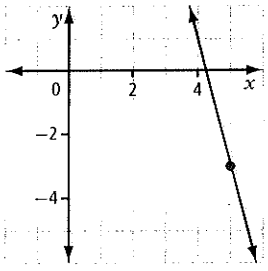
1. a) negative b) positive c) positive
   d) zero e) negative
2. a) $\frac{2}{3}$ b) -1
3. a) $\frac{4}{7}$ b) 0 c) $-\frac{2}{3}$
   d) 3 e) undefined f) $\frac{1}{2}$
4. a)



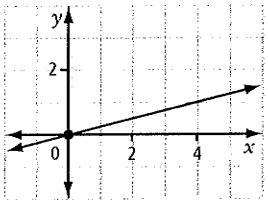
b)



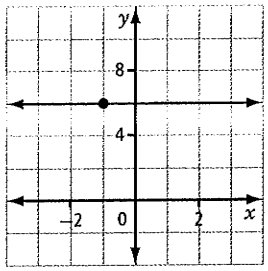
c)



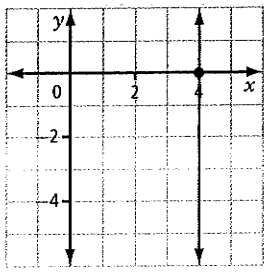
d)



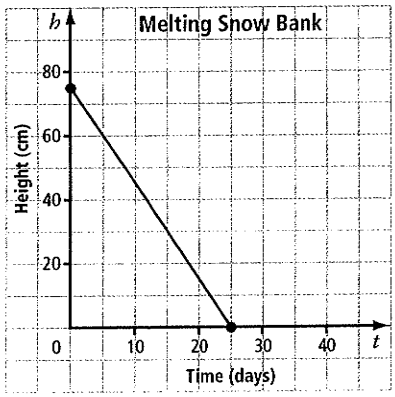
e)



f)



5. −6.5 °C/km
6. approximately −8.3 m/s
7. a)



   b) the height of the snow bank after the number of days defined by that point
   c) The segment ends at (25, 0). After 25 days, the snow bank has completely melted.
   d) The slope represents the rate at which the snow bank is losing height, which is 3 cm per day.
8. a) 216 in. or 18 ft
   b) approximately $216\frac{3}{4}$ in. or 18 ft $\frac{3}{4}$ in.
   c) approximately 24 ft 1 in.
9. a) $\frac{8}{100}$ or 8:100
   b) Example: For every 100 units forward, the height of the road drops 8 units.
10. −3 ft/yr

11. a) The wood bison population diminished at a rate of approximately 1804 wood bison per year.

b) The wood bison population increased at a rate of approximately 47 wood bison per year.

12. a) 933 000 trees/yr

b) This rate of change represents the average increase per year in the number of trees in Alberta infested with the pine beetle from 2004 to 2007.

c) Example: If the same rate of increase continues, then in 2012 the number of trees infested with pine beetles will be 7 465 000, or almost 7.5 million infested trees.

13. a) 341 m/s

b) the speed of sound

c) approximately 10 221 m, or approximately 10 km

14. approximately 0.72

15. a) before heating: 125 cm^3, after heating: approximately 125.75 cm^3

b) 75.1501

16. $\frac{2x}{3}$

17. Example: The ratio of the rise versus the run remains the same (or constant) between any two points on the line.

18. a) Example: The tangent ratio is equal to the ratio of the length of the side opposite the angle (or rise), to the length of the side adjacent to the angle (or run). So, the measure of the angle is $\tan^{-1}\left(\frac{1}{16}\right)$.

b) approximately 3.6°

19. Step 1: 2900 m, 2720 m, and 2640 m

Step 2: The highest peak, 2900 m, closest to the bottom left corner, is Big Sister.

Step 3: Example: Calculate the slope between the lowest point on the mountain and the point that represents the peak.

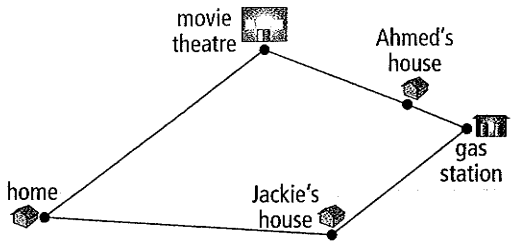
Step 4: Example: AB: 5, BC: 0.1, CD: 1.1, DE: 2.6, FG: 0.6; Sections CD and FG pose an avalanche risk.

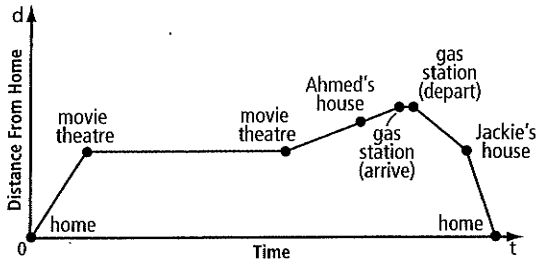
Step 5: Example: The slope is either too flat for the snow to easily fall, or too steep to hold any snow.

Chapter 6 Review, pages 330 to 334

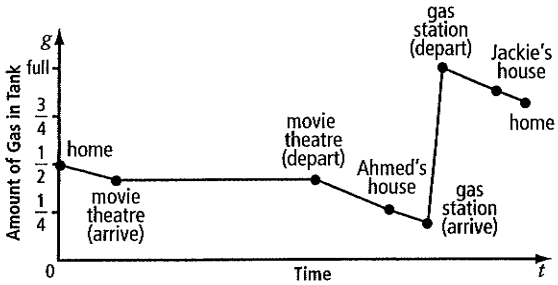
1. Examples:

a)





b)



2. Example: The green line represents televisions. As people age, they tend to go out less and use more home entertainment devices such as television. The red line represents cell phones. Older generations were not raised with access to cell phones. The blue line represents computers. The younger groups are more comfortable with and dependent on this device because they were raised with it.

3. Example: Container 1: Graph A; The container would fill up at a constant, gradual rate.
Container 2: Graph D; The container would fill up quickly at a constant rate.
Container 3: Graph B; The lower portion of the container would fill up more slowly than the upper part.
Container 4: Graph C; The container would fill up more quickly at the bottom and slower at the top.

4. a) non-linear; The distance from the sun would not increase or decrease at a constant rate, and there would be times when the distances would repeat.

b) linear; The values of x are increasing by five each time, and the corresponding values of y are changing at a constant rate.

c) non-linear; The degree is 2.

d) non-linear; The values of x are increasing at a constant rate, but the values of y are not.

e) non-linear; The graph is not a single straight line.

5. B and D

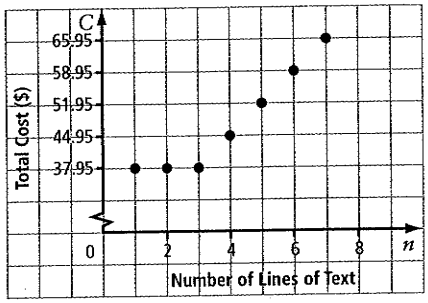
6. a) No. There is no change in the cost for the first three lines of text.

b) dependent variable: total cost; independent variable: number of lines of text

c) (3, 37.95), (4, 44.95), (5, 51.95), (6, 58.95), (7, 65.95)

d) discrete

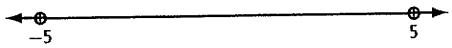
e)



7. a) domain: {−9, −5, 0, 2}, range: {5, 8}

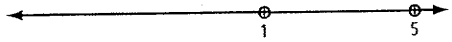
b) domain: {−1, 0, 1, 2, 3}, range: {−3, −1, 1, 3, 5}

8. a) domain:



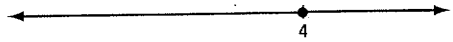
$(-5, 5)$, $\{x \mid -5 < x < 5, x \in \mathrm{R}\}$

range:



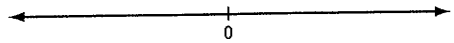
$(1, 5]$, $\{y \mid 1 < y \leq 5, y \in \mathrm{R}\}$

b) domain:



$(\infty, 4]$, $\{x \mid x \leq 4, x \in \mathrm{R}\}$

range:



(∞, ∞), $\{y \mid y \in \mathrm{R}\}$

9. $C = \pi d$

10. $V(r) = r^3$

11. a) function; Each value of x has only one value of y.

b) not a function; It fails the vertical line test.

c) not a function; Black hair colour has one male and one female.

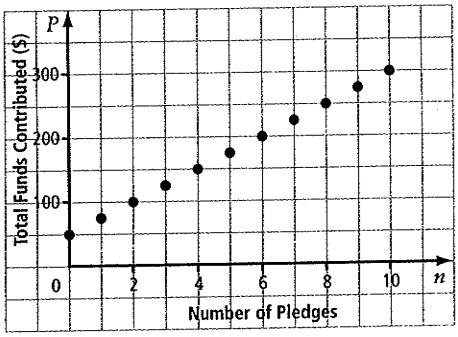
d) not a function; The value of x of 8.6 has more than one value of y.

12. a) approximately 24.4 kg

b) 37.8 kg

13. a)

Number of Pledges	Total Funds Contributed ($)
0	50
1	75
2	100
3	125
4	150
5	175
6	200
7	225
8	250
9	275
10	300



b) $250; If Amber has eight pledges, she will have $250 to donate.

c) more than 25 pledges

d) Example: For each number of pledges, there is only one possible total for the amount raised.

14. a) $\frac{3}{5}$

b) undefined

c) 0

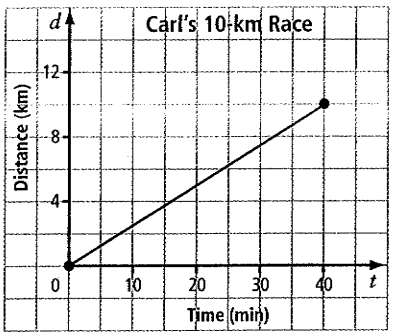
d) −4

15. (450, 0) and (−450, 0)

16. a) $\frac{1}{4}$

b) −2

17. a)



b) Carl's distance covered and the time he has taken to cover that distance

c) (40, 10); This point represents the end of the 10-km race, 40 min after Carl started.

d) his speed, 0.25 km/min

18. a) approximately 1155 people per year

b) This number represents the average rate of increase per year of people aged 12 or older who have asthma in Manitoba.

c) approximately 87 292 people

Chapter 6 Practice Test, pages 335 to 337

1. C

2. D

3. B

4. C

5. D

6. a) 1

b) Examples: (2, 1), (3, 2), and (4, 3)

7. a) approximately 5.4 m/s

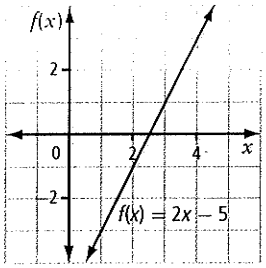
b) This rate represents his actual speed, which combines his speed from rowing and the current speed.

8. a) the boat's speed, in metres per second, after accelerating for 6 s

b) 20 m/s

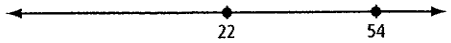
c) 7.2 s

9. Function A



10. a) the time, in hours, beginning at 24:00, and lasting for 3 days

b) Example:

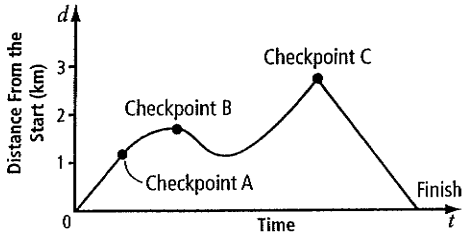


c) Example: [30, 39]

d) Example: $\{t \mid 34 \leq t \leq 37, t \in \mathrm{R}\}$

e) Example: The temperatures are more stable at the deeper depths.

11.



Chapter 7

7.1 Slope-Intercept Form, pages 349 to 356

1. a) $m = -5$, y-intercept: (0, 4)

b) $m = \frac{3}{4}$, y-intercept: (0, 1)

c) $m = 1$, y-intercept: (0, −7)

d) $m = -4$, y-intercept: (0, 0)

e) $m = 0$, y-intercept: (0, −3)

f) $m = 0.5$, y-intercept: (0, −1.25)

2. a) $m = -3$, y-intercept: (0, 2)

b) Example: Plot the point (0, 2). From the point (0, 2), go 3 units down and 1 unit to the right. Draw a line through the two points given.

3. a)