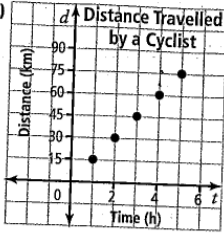


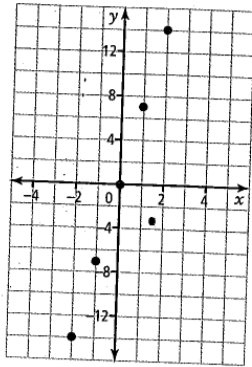
Time (h)	Distance (km)
1	15
2	30
3	45
4	60
5	75



e) Yes, it is reasonable to have points between the ones in the graph. The cyclist can travel for times that are not whole numbers of hours. f) 120 km

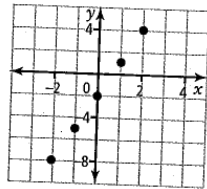
14. Equation A: $y = 7x$

x	y
-2	-14
-1	-7
0	0
1	7
2	14



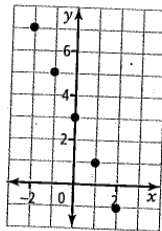
$y = -49$ when $x = -7$
Equation B: $y = 3x - 2$

x	y
-2	-8
-1	-5
0	-2
1	1
2	4



$y = -23$ when $x = -7$
Equation C: $y = -2x + 3$

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



$y = 17$, when $x = -7$
15. a) Both graphs are linear relations and both graphs cross the y-axis at (0, 1). b) The points on the graph lie on straight lines that slant in different directions. The graph of $y = 2x + 1$ increases from left to right and the graph of $y = -2x + 1$ decreases from left to right.

Chapter 10

10.1 Modelling and Solving One-Step Equations:

$ax = b, \frac{x}{a} = b$, pages 376-379

5. a) $3t = -6$ b) $-\frac{w}{2} = -4$ c) $2x = -4$ d) $-\frac{c}{4} = 2$
6. a) $-2 = \frac{m}{3}$ b) $-2n = -10$ c) $-4f = -12$ d) $\frac{p}{4} = -9$
7. a) $j = -8$ b) $n = -5$ c) $k = -18$ d) $x = 44$
8. a) $r = -4$ b) $p = 4$ c) $t = -60$ d) $d = -20$
9. a) $k = -4$ b) $t = -12$
10. a) $b = -5$ b) $x = 9$
11. a) -3 b) -4 c) -9 d) 4
12. a) 5 b) -4 c) 4 d) -21
13. a) $s = -3$ b) $j = 13$ c) $j = -26$ d) $t = 4$
14. a) $f = -7$ b) $q = -9$ c) $h = 21$ d) $k = -5$
15. a) -6 b) 3 c) -21 d) 17
16. a) 11 b) -12 c) 4 d) -3
17. a) $t = -36$ b) $h = -120$ c) $s = -105$ d) $x = 567$
18. a) $y = -20$ b) $k = 48$ c) $b = -10$ d) $r = 180$
19. a) Yes. b) Yes. c) Yes. d) No.
20. a) No. b) No. c) No. d) Yes.
21. a) $\frac{m}{4} = -4$ b) $m = -16^\circ\text{C}$
22. a) $13n = 312$; n is the number of litres. b) 24 L
23. a) $5p = 85$; p is the height of the pygmy owl in centimetres. b) 17 cm
24. a) $8m = 144$ b) $m = 18$ cm
25. Let x be the percent of right-handed boys.

$$\frac{1}{7}x = 11$$

$$x = 77$$

Therefore, 77% of boys are right-handed.

26. a) \$18 000 b) \$72 000
27. $\frac{12h}{2} = 30$; $h = 5$ cm
28. 9 min
29. a) 2994 m in fresh water; 3000 m in salt water
b) Sandra

10.2 Modelling and Solving Two-Step Equations:

$ax + b = c$, pages 385-387

3. a) $x = 1$ b) $g = 2$
4. a) $h = 2$ b) $z = 6$
5. a) $x = 3$ b) $t = -7$
6. a) $d = 3$ b) $z = 4$
7. a) Add 2 to both sides of the equation.
b) Subtract 3 from both sides of the equation.
c) Add 10 to both sides of the equation.
d) Add 1 to both sides of the equation.
8. a) Divide both sides of the equation by 4.
b) Divide both sides of the equation by -3 .
c) Divide both sides of the equation by 2.
d) Divide both sides of the equation by -9 .