3.a)	Number of Yellow Tiles	Number of Red Tiles	Integer Modelled
	0	6	-6
	1	5	-4
	2	4	-2
	3	3	0
	4	2	+2
	5	1	+4
	6	0	+6

- **4.a)** I chose +3. I need 3 yellow tiles to model it.
 - **b)** I add a zero pair each time. I can model +3 in many ways.

c)	Number of	Number of	Integer
	Yellow Tiles	Red Tiles	Modelled
	3	0	+3
	4	1	+3
	5	2	+3
	6	3	+3

There are always 3 more yellow tiles than red tiles. As the number of yellow tiles increases, the number of red tiles increases by the same amount.

d) For a negative integer, such as -23, there will always be 23 more red tiles than yellow tiles. For a positive integer, such as +41, there will be 41 more yellow tiles than red tiles.

5.a) 8 **b**) 98 **6.a**) +9 **b**) −5 **c**) +11 **d**) −9 **e**) −7 **7.a**) +100; −20 **b**) +6; −4

c) +12; -8

2.2 Adding Integers with Tiles, page 58

1.a) (+4) + (-2) = +2**b)** (+2) + (-3) = -1**c)** (-4) + (-2) = -6**d**) (+6) + (-3) = +3**e)** (+1) + (-4) = -3**f)** (+3) + (+2) = +52.a) +1 **b)** -1 **c)** 0 **3.a)** 0 **b)** 0 **c)** 0 The number of red tiles equals the number of yellow tiles each time. 4.a) +5 **b)** +1 **c)** -5 **5.a)** (+4) + (+3) = +7**b)** (-7) + (+5) = -2

- **c)** (-4) + (-5) = -9 **d)** (+8) + (-1) = +7**e)** (-10) + (-6) = -16
- **f)** (+4) + (-13) = -9

6.a) (-3) + (+4) = +1 **b**) (+5) + (-3) = +2 **c**) (+15) + (-7) = +8 **d**) (-3) + (+8) = +5**e**) (+12) + (-5) = +7

9.a) –4

- **b)** No, the sum remains the same.
- **c)** Each integer has been replaced by its opposite. The sum is also replaced by its opposite.

10.a)+(6	b) +	-4	c) -5	(d) +2	2
11. a)	+3	-4	+1	b)	-1	-6	+1
	-2	0	+2		0	-2	-4
	-1	+4	-3		-5	+2	-3

12.a)-8, -12, -16, -20 ...

Add -4 each time to get the next term. **b)** 0, +3, +6, +9 ...

Add +3 each time to get the next term.

2.3 Adding Integers on a Number Line, page 62

1.a) +4	b) +2	c) -2	d) –4
e) –7	f) +1	g) –1	h) +7
2.a) +6	b) +2	c) -6	d) -6
e) -13	f) -5	g) -3	h) +12

- **3.** a), b) The answers are the same.
- c) The order in which you add integers does not matter.
- **4.a)** -2 **b)** -3 **c)** +4
- **5.a)** +5; The temperature rose 5°C.
 - **b)** +4; Adrian gained \$4.
- **c)** +1; The stock was up \$1.
- **6.a) i)** −2
 - **ii)** +5
 - **iii)** –6
 - **iv)** +8
 - **b)** i) (+2) + (-2) = 0
 - **ii)** (-5) + (+5) = 0

iii)
$$(+6) + (-6) = 0$$

- iv) (-8) + (+8) = 0
- **c)** The sum of two opposite integers is 0.
- **7.** a), b) i) (-5) + (-10) = -15
 - You take 15 steps backward.
 - ii) (-5) + (+8) = +3; You deposit \$3.
 - iii) (-8) + (+6) = -2;The diver descends 2 m.