

51 Surveys

- 1 (a) 31
 (b) Technokit $\frac{8}{31}$ Spykit $\frac{11}{31}$
 Dinosaurkit $\frac{9}{31}$ Mystery kit $\frac{3}{31}$
- 2 (a) 35% (b) 29% (c) 10%
- 3 (a) 43% (b) 59% (c) 61% (d) 40%
 (e) 68% (f) 83% (g) 6%
 All of these percentages are to the nearest whole number
- 4 (a) 45 parents
 (b) less than £4 $\frac{4}{45}$
 £4 to £5.99 $\frac{10}{45}$ or $\frac{2}{9}$
 £6 to £7.99 $\frac{8}{45}$
 £8 to £9.99 $\frac{12}{45}$ or $\frac{4}{15}$
 £10 or more $\frac{11}{45}$
 (c) less than £4 9%
 £4 to £5.99 22%
 £6 to £7.99 18%
 £8 to £9.99 27%
 £10 or more 24%
- 5 (a) (b) Answers depend on the results of the children's surveys.
- These percentages are to the nearest whole number.

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- 1 (a) 3 12 21 30 39 48
 (b) 150 125 100 75 50 25
 (c) 4 8 16 32 64 128
 (d) 7 21 35 49 63 77
 (e) 123 234 345 456 567 678
 (f) 69 56 43 30 17 4
- 2 (a) 10 31 52 73 94 115
 (b) 160 80 40 20 10 5
 (c) 4 5 7 10 14 19
 (d) 100 99 96 91 84 75

Scientific models

- 1 (a)

Number of red beads	Number of yellow beads
2	10
3	15
4	20

 • The number of yellow beads is 5 times the number of red beads. $\times 5$
 • When there are 10 red beads, there are 50 yellow beads.
- (b)

Number of red beads	Number of yellow beads
3	2
4	3
5	4

 • The number of yellow beads is one less than the number of red beads. -1
 • When there are 10 red beads, there are 9 yellow beads.
- (c)

Number of red beads	Number of yellow beads
4	2
6	3
8	4

 • The number of yellow beads is half the number of red beads. $\div 2$
 • When there are 10 red beads, there are 5 yellow beads.
- (d)

Number of red beads	Number of yellow beads
2	6
4	8
5	9

 • The number of yellow beads is 4 more than the number of red beads. $+4$
 • When there are 10 red beads, there are 14 yellow beads.
- 2 (a)

Number of blue beads	Number of green beads
2	6
3	9
5	15

 (b) The number of green beads is 3 times the number of blue beads. $\times 3$
 (c) •24 •45 •75 •120 blue beads

53 Scientific models – continued

- 3 (a) The number of red beads is 6 more than the number of white beads.
The missing number is 30. +6
- (b) The number of red beads is 4 less than the number of white beads.
The missing number is 12. -4
- (c) The number of red beads is the number of white beads divided by 7.
The missing number is 8. ÷7

54 Plant foods

- 1 (a)

Number of litres	Number of drops
1	2
2	4
3	6
4	8
5	10
6	12

 (b) The number of drops is two times the number of litres.
- 2 Boost (a)

Number of litres	Number of drops
1	4
2	8
3	12
4	16
5	20
6	24

 (b) The number of drops is four times the number of litres.
(c) $D = 4 \times L$
- Green fingers (a)

Number of litres	Number of drops
1	4
2	5
3	6
4	7
5	8
6	9

 (b) The number of drops is the number of litres plus three.
(c) $D = L + 3$

Plant foods – continued**54**

Zoom	(a)	Number of litres	Number of drops	(b) The number of drops is three times the number of litres.
		1	3	
		2	6	
		3	9	
		4	12	
		5	15	
		6	18	

(c) $D = 3 \times L$

- 3 (a) $D = L - 1$ (b) $D = L + 3$ (c) $D = L + 5$

- 4 (a) • 24 tags • 48 tags
(b) The number of tags is 6 times the number of microchips.
(c) $T = 6 \times M$

Microchips**55**

- 1 (a) 30 tags (b) 60 tags (c) 120 tags

(a)	Number of microchips (M)	Cost in £ of board + chips (C)
	1	3
	2	4
	3	5
	4	6
	5	7
	6	8

- (b) $C = M + 2$

- (c) • £12 • £14 • £22

- 3 (a) 48 holes 54 holes 72 holes
(b) 8 microchips 9 microchips 12 microchips
(c) $M = H \div 6$
(d) • $M = 6$ • $M = 10$ • $M = 20$

56 Vitamin pills

1 (a)

Number of pills (P)		Number of tangerines (T)
1	→	4
2	→	8
3	→	12
4	→	16

(b) $T = 4 \times P$

(c) •32 •40 •52 •100 tangerines

2 (a)

Number of capsules (C)		Number of lemons (L)
1	→	3
2	→	6
3	→	9
4	→	12

(b) $L = 3 \times C$

(c) •18 •42 •63 •120 lemons