44 End of cruise barbecue

1 (a) 17 jugs are needed.
(b) 16 jugs are full.

2 (a) 381 kebabs
(b) 277 kebabs
(c) 261 kebabs

3 (a) 15 tables (b) 23 tables
(c) 37 tables (d) 44 tables

4 12 balloons

5 13 boxes

6 11 burgers

45 Centiles

1 (a) red 31% blue 21% yellow 48%
(b) red 26% blue 30% yellow 44%
(c) red 8% blue 60% yellow 32%

2 **See Workbook page 9, question 1**

3 68%

4 (a) complete 85% not complete 15%
(b) complete 17% not complete 83%

5 (a) 35% are white.
(b) 38% have medium tiles.

6 **See Workbook page 9, questions 2 and 3**

Soldiering on 46

1 (a) $\frac{7}{10}$ (b) $\frac{3}{20}$ (c) $\frac{1}{25}$ (d) $\frac{3}{5}$ (e) $\frac{6}{25}$ (f) $\frac{13}{20}$

2 (a) 100 soldiers (b) 20 soldiers (c) 50 soldiers

3 (a) 10 (b) 9 (c) 9 (d) 9
(e) 21 (f) 3 (g) 65 (h) 16
(i) 15 (j) 9 (k) 30 (l) 21

4 (a) 16 soldiers (b) 120 soldiers

5 (a) November: 4710 Roman 942 Mediaeval 2355 Hussars
December: 1780 Roman 356 Mediaeval 890 Hussars
(b) Possible reasons:
More kits were needed in time for increased sales at Christmas.
The factory was on holiday at Christmas time.
Other valid reasons are possible.

Transport kits 47

1 (a) 63 (b) 152 (c) 117 (d) 315

2 1940 sports cars 1455 racing cars
970 classic cars 485 vintage cars

3 (a) 39 (b) 93 (c) 87 (d) 1110

4 1290 Concorde kits

5 3430 tram cars

6 855 buses were faulty.

48 Stock

1 (a) 0·16 (b) 0·97 (c) 0·45 (d) 0·26
(e) 0·40 (f) 0·70 (g) 0·07 (h) 0·04
(i) 0·21 (j) 0·01 (k) 0·10 (l) 1

2 (a) 88 Technokits (b) 40 Electrokits
(c) 72 Buildakits (d) 68 Structakits

3 (a) 72 (b) 48 (c) 63 (d) 126

4 (a) 101 (b) 140 (c) 75 (d) 52
(e) 60 (f) 110 (g) 82 *or* 83 (h) 51

5 (a) Mosaic: 588 more kits
Buildakit: 189 more kits
Technokit: 1584 more kits
(b) Vintage car: 429 fewer kits
Galleon: 258 fewer kits
Balloon: 770 fewer kits

49 Orders

1 Parkland School: 3 to 5 years $\frac{36}{100}$ 36%
6 to 8 years $\frac{24}{100}$ 24%
older than 8 $\frac{40}{100}$ 40%
Queensway School: 3 to 5 years $\frac{29}{100}$ 29%
6 to 8 years $\frac{33}{100}$ 33%
older than 8 $\frac{38}{100}$ 38%
Crinan School: 3 to 5 years $\frac{42}{100}$ 42%
6 to 8 years $\frac{24}{100}$ 24%
older than 8 $\frac{34}{100}$ 34%

2 Small jigsaws $\frac{8}{25}$ 32%

3 (a) $\frac{6}{25}$ 24% (b) $\frac{34}{50}$ 68% (c) $\frac{29}{50}$ 58%
(d) $\frac{13}{20}$ 65% (e) $\frac{8}{20}$ 40% (f) $\frac{11}{25}$ 44%

Orders – *continued* 49

4 Small Constructakits $\frac{6}{24}$ 25%

5 (a) large kits 25% small kits 75%
(b) large kits 50% small kits 50%
(c) large kits 10% small kits 90%
(d) large kits 50% small kits 50%
(e) large kits 75% small kits 25%
(f) large kits 10% small kits 90%

6 (a) 50% (b) 28% (c) 50% (d) 45% (e) 36%
(f) 41% (g) 25%

7 90 small Buildakits

Kitbits competition 50

1 (a) WHICH KIT DO YOU WANT TO WIN
(b) Answers depend on the children's choice.

2 (a) More boys entered (40% girls, 45% boys). (b) 15% were adults

3 (a)

Kit chosen	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Spykit	4%	7%	11%	19%	28%	36%
Technokit	28%	30%	25%	22%	20%	16%
Mystery kit	68%	63%	64%	59%	52%	48%

(b) Weeks 5 and 6
(c) Week 6

4 (a) 10% lived in Wales.
(b) 600 lived in Scotland.

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%

These percentages are to the nearest whole number.

5 (a) (b) Answers depend on the results of the children's surveys.

52 Global Research Technology

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 53

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.
- 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.
- 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.
- 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.
- 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.

(c) •24 •45 •75 •120 blue beads