

Answers

Chapter 7 Addition and subtraction with 3-digit numbers

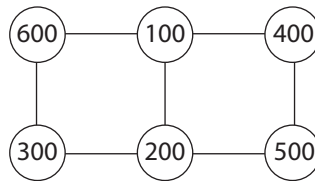
Unit 7.1

- (a) 3 2 5
(b) 4 5 9
(c) 9 3 6
(d) 6 4 2
- (a) 700 (b) 600
(c) 300 (d) 600
(e) 900 (f) 500
(g) 100 (h) 400
- (a) 45 2 47
(b) 45 2 43
(c) 36 12 48
(d) 36 12 24
- (a) 19 (b) 190
(c) 37 (d) 370
(e) 43 (f) 430
(g) 86 (h) 860
- (a) = (b) <
(c) = (d) <
- (a) $400 - 230 = 170$ (pounds)
(b) $530 + 380 = 910$ (books)
(c) $200 - 180 = 20$ (pounds)
(d) $340 + 270 = 610$ (apple trees)
- is greater. It is 300 greater

Unit 7.2

- (a) 170 (b) 820
(c) 200 (d) 710
(e) 880 (f) 970
(g) 220 (h) 730
(i) 500 (j) 170
(k) 230 (l) 350
- (a) 510 370 480 500 650 610 1000
(b) 80 150 220 290 260 190 160
- (a) 800 400
(b) 330 170
(c) 630 290
(d) 1000 440
- (a) 210 480 640 450
(b) 800 450 770 500
(c) 450 370 660 320
(d) 30 390 240 350
- (a) Meera: $800 - 200 = 600$ (m)
Caitlin: $800 - 250 = 550$ (m)
Meera ran faster.
(b) $250 - 90 - 110 = 50$ (apples)
(c) $150 + 280 + 130 = 560$ (stamps)
(d) $30 + 80 + 160 = 270$ (seats)

- 6 (Answers may vary) for example:



Unit 7.3

- (a) 25 (b) 38
(c) 47 (d) 34
(e) 325 (f) 238
(g) 547 (h) 434
- (a) 334 (b) 108
(c) 320 (d) 111
(e) 219 (f) 241
(g) 444 (h) 600
- (a) 304 (b) 494
(c) 503 (d) 295
- (a) 401 603
(b) 801 907
(c) 195 698
(d) 595 497
- (a) 295 (b) 198
(c) 501 (d) 903
(e) 316 (f) 702
(g) 784 (h) 591
(i) 499 (j) 771
(k) 500 (l) 391
- (a) 234 241 249 258
(b) 405 400 403 397
(c) 695 703 694 690
- Answers may vary

Unit 7.4

- (a) 333 (b) 581
(c) 717 (d) 369
(e) 272 (f) 504
(g) 297 (h) 801
(i) 698 (j) 380
(k) 262 (l) 180
- (a) 6 (b) 5
(c) 4 (d) 1000
(e) 606 (f) 7
- The following linked:
(a) $627 + 5$ to 632 to 641 - 9
(b) $689 + 6$ to 695 to 702 - 7
(c) $697 + 5$ to 702 to 710 - 8
- (a) $203 + 9 = 212$ (containers)
(b) $132 - 5 = 127$ (cm)
(c) $256 - 8 - 7 = 241$ (TVs)
(d) $142 + 6 - 8 = 140$ (skips)

- 5 (a) $984 + 2 = 986$ or $982 + 4 = 986$
(b) $248 - 9 = 239$

Unit 7.5

- (a) 538
(b) 586
(c) 383 525
(d) 782 401
- (a) 657 (b) 664
(c) 978 (d) 783
- Answers may vary
- (a) $239 + 384 = 623$
(b) $574 + 168 = 742$
- (a) 3 (b) 4
(c) 3, 4

Unit 7.6

- (a) 684 (b) 434
(c) 927 (d) 515
(e) 597 (f) 785
- (a) X 614
(b) X 504
(c) ✓
- 477 532 799 611 722 1000
- (a) $278 + 375 = 653$
(b) $468 + 332 = 800$
(c) $396 + 322 = 718$
- (a) $312 + 268 = 580$ (metres)
(b) $162 + 135 = 297$ (pages)
(c) $138 + 162 = 300$ (pounds)
- 781

Unit 7.7

- (a) 214
(b) 313
(c) 171 388
(d) 259 137
- (a) 465 (b) 733
(c) 93 (d) 295
- Answers may vary
- (a) $429 - 290 = 139$
(b) $695 - 348 = 347$
- The mass of 1 pack of salt: $630 - 470 = 160$ (grams)
The mass of 1 pack of sugar: $470 - 160 = 310$ (grams)

Unit 7.8

- (a) 156 (b) 41
(c) 76 (d) 168
(e) 332 (f) 29

- 2 (a) $\times 336$
 (b) $\times 82$
 (c) $\times 66$
- 3 604 296 181 136 178 39
- 4 (a) $558 - 305 = 253$
 (b) $462 - 256 = 206$
 (c) $673 - 625 = 48$
- 5 (a) $769 - 372 = 397$ (kilometres)
 (b) $372 - 112 = 260$ (kilometres)
 (c) Answers may vary
- 6 (a) 4 (b) 3

Unit 7.9

- 1 (a) 400 (b) 220
 (c) 680 (d) 73
 (e) 660 (f) 550
 (g) 70 (h) 590
- 2 530 500 660 700 710 700 350 300
 500 500
- 3 (a) 380 380
 (b) 760 759
 (c) 500 498
 (d) 950 948
 (e) 250 256
 (f) 330 334
- 4 (a) 600 605
 (b) 800 786
 (c) 700 716
 (d) 900 936
 (e) 200 191
 (f) 100 149
- 5 (a) Estimate:
 $230 + 200 = 430$ (children) 430
 < 450 Yes, it is possible for Year 3
 and Year 4 children to swim at the
 same time

- (b) Estimate: $290 + 340 = 630$ (trees)
 $340 - 290 = 50$ (trees)
- (c) (i) Estimate $80 + 110 = 190$
 (pounds) $190 < 200$ She has
 enough money
 (ii) $79 + 114 = 193$ (pounds)
 $200 - 193 = 7$ (pounds)
- 6 (a) 264 (b) 462

Unit 7.10

- 1 (a) 610 (b) 210
 (c) 640 (d) 340
 (e) 150 (f) 690
 (g) 910 (h) 570
- 2 (a) 710 700 709
 (b) 1000 1000 999
 (c) 520 500 522
 (d) 220 200 224
- 3 (a) 335 (b) 336
 (c) 337 (d) 338
 (e) 554 (f) 555
 (g) 556 (h) 557
 (i) 70 (j) 69
 (k) 68 (l) 67
 (m) 453 (n) 452
 (o) 451 (p) 450
- 4 (a) (i) AF CE BGH (ii) F E G
 (b) (i) 389 (ii) 591
 (iii) 512 (iv) 630
 (v) 501 (vi) 404
 (vii) 594 (viii) 538
- 5 (a) (Estimates may vary)
 $310 - 178 = 132$ (metres)
 (b) (Estimates may vary)
 $244 - 156 = 88$ (metres)
 (c) Answers may vary

- 6 Three ways:
 $123 + 678 = 234 + 567 = 345 + 456$;
 $123 + 789 = 234 + 678 = 345 + 567$;
 $234 + 789 = 345 + 678 = 456 + 567$

Chapter 7 test

- 1 (a) 215 (b) 162
 (c) 870 (d) 220
 (e) 324 (f) 295
 (g) 330 (h) 218
- 2 (a) 255 (b) 522
 (c) 109 (d) 174
 (e) 147 (f) 35
- 3 (a) (i) 400 393
 (ii) 600 588
 (iii) 200 216
 (iv) 200 180
 (b) (i) 510 508
 (ii) 390 391
 (iii) 110 112
 (iv) 360 364
- 4 (a) $402 + 148 = 550$
 (b) $662 - 266 = 396$
 (c) $800 - 482 = 318$
- 5 (a) $560 - 388 = 172$
 (b) $105 - 39 = 66$
 (c) $288 + 109 = 397$
- 6 $337 + 368 = 705$ (children)
- 7 $700 - 678 = 22$ (pounds)
- 8 $226 - 187 = 39$ (books)
- 9 (a) $295 + 127 = 422$ (stamps)
 (b) $422 - 250 = 172$ (stamps)
- 10 (a) $215 - 36 = 179$ (tonnes)
 (b) $179 + 78 = 257$ (tonnes)

Chapter 8 Simple fractions and their addition and subtraction

Unit 8.1

- 1 (a) $\frac{1}{2}$ (b) $\frac{1}{3}$
 (c) $\frac{1}{4}$ (d) $\frac{1}{8}$
 (e) $\frac{1}{10}$ (f) $\frac{4}{10}$
- The unit fractions are $\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{4}$ $\frac{1}{8}$ $\frac{1}{10}$
- 2 (a) Three stars circled
 (b) Two diamonds circled
 (c) Two triangles circled
 (d) Six triangles circled

- 3 (a) $\frac{2}{10}$ $\frac{4}{10}$ $\frac{5}{10}$ $\frac{6}{10}$ $\frac{7}{10}$ $\frac{8}{10}$ $\frac{9}{10}$
 (b) $\frac{1}{10}$ $\frac{3}{10}$ $\frac{5}{10}$ $\frac{7}{10}$ $\frac{9}{10}$; $\frac{1}{10}$, $\frac{1}{10}$, 2, $\frac{9}{10}$
 (c) $\frac{1}{10}$, $\frac{9}{10}$, 3, 0
- 4 (a) $\frac{1}{10}$ (b) $\frac{3}{10}$
 (c) $\frac{2}{10}$ (d) $\frac{4}{10}$
 (e) $\frac{1}{10}$ $\frac{2}{10}$ $\frac{3}{10}$ $\frac{4}{10}$
- 5 $\frac{1}{10}$ $\frac{1}{5}$ $\frac{1}{4}$ $\frac{3}{10}$ $\frac{1}{2}$ $\frac{7}{10}$ $\frac{9}{10}$

Unit 8.2

- 1 (a) $\frac{1}{9}$ $\frac{5}{9}$ $\frac{4}{9}$
 (b) $\frac{1}{4}$ $\frac{3}{4}$
 (c) $\frac{1}{9}$ $\frac{1}{4}$; $\frac{5}{9}$ $\frac{4}{9}$ $\frac{3}{4}$
- 2 (a) $\frac{4}{9}$ (b) $\frac{2}{6}$
 (c) $\frac{2}{8}$ or $\frac{1}{4}$
- 3 (a) \times (b) \checkmark
 (c) \checkmark
- 4 (a) $\frac{1}{7}$ $\frac{4}{7}$
 (b) (i) 2 (ii) 3
 (iii) 6 (iv) 9

5 (a) $\frac{1}{7}$ $\frac{2}{7}$ $\frac{4}{7}$ $\frac{5}{7}$ $\frac{6}{7}$

(b) $\frac{2}{9}$ $\frac{4}{9}$ $\frac{7}{9}$ $\frac{8}{9}$ 1

6 (a) 4 (b) 6
(c) 8 (d) 12
(e) 18 (f) 24

Unit 8.3

1 (a) (i) $\frac{1}{4}$ (ii) $\frac{4}{4}$ (iii) 1

(b) $\frac{6}{6}$

2 (a) $\frac{1}{2}$ or $\frac{4}{8}$

(b) $\frac{15}{15}$ or 1

(c) $\frac{2}{3}$ or $\frac{8}{12}$

3 (a) $\frac{10}{10}$ 1

(b) (i) < (ii) > (iii) =

(c) $\frac{4}{4}$ 1

(d) 2

(e) $\frac{4}{6}$ $\frac{1}{5}$ 1

(f) $\frac{5}{8}$

4 Lines drawn to link $\frac{1}{2}$ to $\frac{3}{6}$, $\frac{5}{6}$ to $\frac{10}{12}$,
 $\frac{2}{7}$ to $\frac{4}{14}$, $\frac{3}{5}$ to $\frac{6}{10}$, $\frac{4}{6}$ to $\frac{2}{3}$, $\frac{3}{4}$ to $\frac{9}{12}$

5 (a) $\frac{1}{4}$ (b) $\frac{3}{9}$ or $\frac{6}{18}$

6 (a) 6, 8

(b) Lily

(c) No, 48 is not a multiple of 5

(d) Answer may vary, but 48 must be divisible by the denominator of the fraction

Unit 8.4

1 (a) $\frac{3}{4}$ (b) $\frac{5}{7}$

(c) $\frac{8}{8}$ 1

2 (a) $\frac{3}{5}$ (b) $\frac{4}{8}$, $\frac{1}{2}$

3 (a) $\frac{2}{2}$ or 1

(b) $\frac{6}{7}$

(c) $\frac{4}{4}$ or 1

(d) $\frac{2}{3}$

(e) $\frac{7}{9}$

(f) $\frac{5}{5}$ or 1

4 (a) $\frac{2}{8}$ (b) $\frac{1}{2}$

(c) 0 (d) $\frac{5}{7}$

(e) $\frac{2}{4}$ (f) $\frac{4}{5}$

5 (a) $\frac{3}{24}$ $\frac{4}{24}$ $\frac{5}{24}$

(b) $\frac{7}{24}$

(c) $\frac{12}{24}$ or $\frac{1}{2}$

(d) $\frac{12}{24}$ or $\frac{1}{2}$, 12 (pages)

6 (a) $\frac{1}{12}$ $\frac{3}{12}$ $\frac{3}{12}$ $\frac{5}{12}$

(b) $\frac{3}{12} + \frac{3}{12} = \frac{6}{12}$

(c) $\frac{3}{12} + \frac{3}{12} + \frac{5}{12} = \frac{11}{12}$

(d) Mum, grandma, $\frac{5}{12} - \frac{1}{12} = \frac{4}{12}$, 4

Chapter 8 test

1 (a) $\frac{1}{10}$ $\frac{5}{10}$ $\frac{1}{2}$

(b) 2 10 15

(c) sixths, four sixths, $\frac{7}{8}$

(d) 4, 12

(e) bigger, bigger

2 (a) = (b) < (c) >

3 Lines drawn to link $\frac{2}{3}$ to $\frac{4}{6}$, $\frac{4}{5}$ to $\frac{8}{10}$,

$\frac{7}{8}$ to $\frac{14}{16}$, $\frac{1}{3}$ to $\frac{3}{9}$, $\frac{7}{14}$ to $\frac{4}{8}$

4 (a) $\frac{1}{12}$ $\frac{1}{9}$ $\frac{3}{14}$ $\frac{1}{2}$ 1

(b) $\frac{2}{7}$ $\frac{4}{7}$ $\frac{5}{7}$ $\frac{6}{7}$ 1

5 (a) $\frac{2}{4}$ (b) $\frac{5}{9}$ (c) $\frac{10}{10}$ or 1

(d) $\frac{1}{3}$ (e) $\frac{9}{11}$ (f) $\frac{5}{5}$ or 1

(g) $\frac{4}{10}$ (h) 0 (i) $\frac{1}{8}$

6 (a) 14

(b) $\frac{3}{14}$ $\frac{4}{14}$ $\frac{7}{14}$

(c) $\frac{4}{14} + \frac{7}{14} = \frac{11}{14}$

(d) $\triangle \circ \frac{7}{14} - \frac{3}{14} = \frac{4}{14}$

7 (a) $\frac{3}{12}$ (b) $\frac{6}{12}$ or $\frac{1}{2}$ (c) yes

8 (a) $\frac{1}{4}$ (b) $\frac{1}{8}$ (c) $\frac{1}{16}$

(d) $\frac{1}{8}$ (e) $\frac{1}{8}$ (f) (Answers may vary)

Chapter 9 Multiplying and dividing by a 1-digit number

Unit 9.1

1 (a) 28 (b) 15 (c) 54
(d) 280 (e) 150 (f) 540

(g) 2800

(h) 1500

(i) 540

2 (a) (i) 240, $4 \times 60 = 240$

(ii) 1000, $5 \times 200 = 1000$

(b) 3 18 180

(c) 2

3 (a) = (b) > (c) <
(d) < (e) < (f) = 1

4 (a) 5×70 ~~3500~~

(b) 500×7 ~~35~~

(c) 5×7000 ~~350~~

(d) 5×7 ~~35000~~

5 (a) 400 (b) 2

(c) 5 (d) 4

6 (a) $40 \times 9 = 360$

(b) $3 \times 600 = 1800$

(c) $8 \times 400 + 8 = 3208$

7 $500 \times 8 = 4000$ (grams), $4000 \text{ g} = 4 \text{ kg}$

8 $50 \times 8 \times 2 \times 3 = 2400$ (pounds)

Unit 9.2

- 1 (a) 27 (b) 32
 (c) 42 (d) 270
 (e) 320 (f) 4200
 (g) 2700 (h) 320
 (i) 4200 (j) 2700
 (k) 3200 (l) 4200
- 2 (a) 5, 35, 3500
 (b) 3
- 3 (a) = (b) =
 (c) > (d) =
 (e) > (f) =
- 4 Lines drawn from
 (a) 5×80 to 400
 (b) 500×8 to 4000
 (c) 50×800 to 40 000
 (d) 5×8 to 40 and
 (e) 500×800 to 400 000
- 5 (a) C (b) B
- 6 (a) $400 \times 4 = 1600$, $400 + 1600 = 2000$
 (b) $300 \times 5 = 1500$ (pounds), $1500 - 300 = 1200$ (pounds)
- 7 80, 20, 4000, 16, 160, 400, 32

Unit 9.3

- 1 (a) $6 \times 11 = 66$
 (b) $30 \times 4 = 120$ (pounds)
 (c) $12 \times 3 = 36$ (pounds)
- 2 Lines drawn to match
 (a) to 2×70
 (b) to 2×45
 (c) to 2×12
 (d) to 4×10
- 3 (a) Lines drawn to match 39×8 to 312, 26×3 to 78 and 92×4 to 368
 (b) 276, 138×2 or 92×3 or 69×4 or 23×12 (answers may vary)
- 4 Answers may vary
- 5 5 and 11, 6 and 10, 7 and 9, 8 and 8; 8 8

Unit 9.4

- 1 $10 \times 6 = 60$, $3 \times 6 = 18$, $60 + 18 = 78$,
 $13 \times 6 = 78$
- 2 (a) 518 (b) 208
 (c) 576 (d) 186
 (e) 534 (f) 270
- 3 (a) $15 \times 8 = 120$ (children)
 (b) $24 \times 2 = 48$ (children)
- 4 (a) > (b) <
 (c) < (d) <
- In each pair the calculation with the bigger 1-digit number has the bigger answer.

Unit 9.5

- 1 243
 2 98

- 3 (a) 248 (b) 64
 (c) 85 (d) 357
- 4 (a) No, $14 \times 4 = 56$
 (b) Yes
- 5 $59 \times 8 = 472$ or $84 \times 8 = 672$ or
 $34 \times 8 = 272$

Unit 9.6

- 1 (a) 20 (b) 30
 (c) 53 (d) 53
 (e) 61 (f) 41
 (g) 52 (h) 3
- 2 (a) 308 (b) 324
 (c) 200 (d) 300
- 3 Estimates may vary
 (a) 343 (b) 450 (c) 704
- 4 (a) No, $99 \times 9 = 891$
 (b) No, $26 \times 8 = 208$
 (c) No, $68 \times 5 = 340$
- 5 Lines drawn to show
 $25 \times 7 = 175$, $56 \times 4 = 224$, $9 \times 42 = 378$
 and $5 \times 63 = 315$
- 6 (a) $98 \times 4 = 392$ (pounds)
 (b) $57 \times 6 = 342$ (pounds)
- 7 $195 \times 8 = 1560$ or $190 \times 8 = 1520$

Unit 9.7

- 1 (a) 2400 (b) 240
 (c) 24 (d) 160
 (e) 1600 (f) 16
 (g) 6300 (h) 630
 (i) 63 (j) 360
 (k) 2800 (l) 27
- 2 (b) $427 = 400 + 20 + 7$
 (c) $987 = 900 + 80 + 7$
 (d) $634 = 600 + 30 + 4$
- 3 $3 \times 316 = 948$
- 4 (a) 1708 (b) 3804
 (c) 1850
- 5 (a) 1197 (b) 837
 (c) 1854
- 6 (a) ✓ (b) \times , $107 \times 5 = 535$
 (c) ✓
- 7 (a) (i) $416 \times 7 = 2912$
 (ii) $508 \times 8 = 4064$
 (b) ■ = 1, ▲ = 7, ● = 2

Unit 9.8

- 1 (a) 25 (b) 250
 (c) 2500 (d) 10
 (e) 100 (f) 1000
 (g) 21 (h) 210
 (i) 2100 (j) 36
 (k) 360 (l) 3600
- 2 (a) 1440 (b) 144
- 3 (a) 780 (b) 4050
 (c) 2000; 3 4

- 4 (a) 2 (b) 4
- 5 (a) $120 \times 9 = 1080$ (pages)
 (b) $205 \times 4 = 820$
- 6 B
- 7 1200 2400 2400 4800; for example, when one of the numbers is doubled so is the product

Unit 9.9

- 1 (a) 270 (b) 91
 (c) 63 (d) 4000
 (e) 80 (f) 63
- 2 (a) 294 (b) 804
 (c) 3360
- 3 (a) < (b) >
 (c) < (d) >
 (e) > (f) =
- 4 (a) 4 (b) 3, 4
 (c) 3 200 250
- 5 (a) $650 \times 7 = 4550$
 (b) $4 \times 723 = 2892$
 (c) $106 \times 5 = 530$
 (d) $38 \times 8 = 304$
- 6 $39 \times 2 = 78$ (kg)
- 7 $18 \times 9 + 42 = 204$ (pages)
- 8 $4 \times 26 \times 3 = 312$ (books)
- 9 (a) $708 \times 5 = 3540$ or $728 \times 5 = 3640$ or
 $748 \times 5 = 3740$ or $768 \times 5 = 3840$ or
 $788 \times 5 = 3940$
 (b) $190 \times 4 = 760$

Unit 9.10

- 1 (a) (i) 2 (ii) 4
 (iii) 8 (iv) 5
 (v) 20 (vi) 40
 (vii) 80 (viii) 50
 (b) (i) 3 (ii) 4
 (iii) 1 (iv) 2
 (v) 30 (vi) 40
 (vii) 10 (viii) 20
 (ix) 300 (x) 400
 (xi) 100 (xii) 200
- 2 (a) 8 (b) 8
 (c) 8 (d) 8
 (e) 8 (f) 8
 (g) 9 (h) 9
 (i) 9
- 3 (a) 8 (b) 30
 (c) 6 (d) 20
 (e) 50 (f) 7
 (g) 90 (h) 2
 (i) 4 (j) 5
 (k) 5 (l) 9
 (m) 6 (n) 7
 (o) 7 (p) 5

Answers

- 4 (a) $270 \div 3 = 90$
 (b) $350 \div 50 = 7$
 (c) $640 \div 8 = 80$
- 5 (a) $720 \div 9 = 80$ (books)
 (b) $1500 \div 3 = 500$ (pounds)
 (c) $240 \times 4 + 240 = 1200$ (litres)
- 6 $\blacktriangle = 3$ $\blacksquare = 20$ $\bullet = 9$

Unit 9.11

- 1 (a) 4 r 1 (b) 6 r 1
 (c) 5 r 2 (d) 6 r 2
 (e) 6 r 1 (f) 7 r 1
 (g) 9 r 3 (h) 9 r 2
- 2 (a) 5 (b) 6
 (c) 6 (d) 6
 (e) 8 (f) 8
- 3 (a) Minna: 50, 10, 23, 4 r 3, 14, 14 r 3
 (b) Asif: 10, 4 r 3, 14 r 3
- 4 (a) 16, 10, 6
 (b) 23, 20, 3
 (c) $12, 70 \div 7 = 10, 14 \div 7 = 2$
 (d) $11 \text{ r } 4, 70 \div 7 = 10, 11 \div 7 = 1 \text{ r } 4$
 (e) $14 \text{ r } 2, 60 \div 6 = 10, 26 \div 6 = 4 \text{ r } 2$
- 5 (a) $95 \div 7 = 13 \text{ r } 4$
 (b) $75 \div 5 = 15$
 (c) $5 \times 125 = 625$
- 6 (a) $90 \div 6 = 15$
 (b) $4 \times 25 = 100$ (toys), $100 > 96$, yes
- 7 (Other answers may be possible)
 (a) $4 + 4 - 4 - 4 = 0$
 (b) $(4 + 4 + 4) \div 4 = 3$
 (c) $(4 + 4) \div (4 + 4) = 1$
 (d) $(4 \times 4 + 4) \div 4 = 5$
 (e) $4 \div 4 + 4 \div 4 = 2$
 (f) $(4 + 4) \times 4 \div 4 = 8$

Unit 9.12

- 1 (a) 3 r 2 (b) 6 r 1
 (c) 7 r 7 (d) 6 r 1
 (e) 8 r 3 (f) 8 r 6
 (g) 5 r 3 (h) 9 r 3
- 2 (b) 39 (c) 13
 (d) 23 (e) 31
 (f) 12
- 3 (a) 12 (b) 32
 (c) 34 (d) 25
- 4 (a) $39 \div 3 = 13$
 (b) $78 \div 6 = 13$
- 5 (a) $(35 + 53) \div 4 = 22$ (hutches)
 (b) $54 \div 2 = 27$ (children)
- 6 $11 \div 4 = 2 \text{ r } 3$
- 7 16 chocolates

Unit 9.13

- 1 (a) 6 (b) 6
 (c) 7 (d) 9
 (e) 5 (f) 5

- 2 (a) 5 (b) 9 r 1
 (c) 4 r 2 (d) 6 r 2
 (e) 5 r 2 (f) 5 r 1
 (g) 3 r 4 (h) 5 r 5
- 3 (a) 5 r 2 (b) 6 r 4
 (c) 7 r 2 (d) 7 r 3
 (e) 18 (f) 13
 (g) 16 (h) 12
- 4 (a) $27 \div 3 = 9$ (children)
 (b) $88 \div 5 = 17 \text{ r } 3$ (balls)
 (c) $78 \div 5 = 15$ (coats) r 3 (buttons)
- 5 7 pencils or 14 pencils or 21 pencils or 28 pencils or 35 pencils

Unit 9.14

- 1 (a) 10 (b) 20
 (c) 20 (d) 100
 (e) 13 (f) 24
 (g) 21 (h) 2000
- 2 (a) 32 (b) 30 r 2
 (c) 16 (d) 15 r 2
- 3 (a) 20 r 3 (b) 40 r 1
 (c) 10 r 5 (d) 20
 (e) 10 r 6 (f) 10 r 3
 (g) 10 r 5 (h) 10 r 7
- 4 (a) 120 80 60
 (b) 1000 600 500
- 5 (a) 400 (b) 900
 (c) 2000 (d) 200
 (e) 300 (f) 500
- 6 (a) $82 \div 2 = 41$
 (b) $900 \div 3 = 300$
 (c) $640 \div 2 = 320$
 (d) $320 \div 4 = 80$
- 7 $210 \div 3 = 70$ (patches)
- 8 The 8th place

Unit 9.15

- 1 (a) 60 (b) 360
 (c) 3000 (d) 8000
 (e) 23 (f) 1500
 (g) 6 r 6 (h) 7000
 (i) 63 (j) 210
 (k) 40 (l) 400
- 2 (a) 14 r 2 (b) 30 r 1
 (c) 18 r 2 (d) 12 r 1
 (e) 16 r 1 (f) 10 r 4
- 3 (a) $96 \div 3 = 32$
 (b) $63 \div 7 = 9$ (days)
 (c) $96 \div 8 = 12$ (minutes)
 (d) $(39 + 45) \div 4 = 21$ (groups)
 (e) $45 \div 5 = 9, 9 < 15$, yes, the remaining jars: $15 - 9 = 6$
- 4 $31 \div 7 = 4 \text{ r } 3$ and $31 \div 4 = 7 \text{ r } 3$
- 5 (a) $39 \div 7 = 5 \text{ r } 4$
 (b) (Answers may vary) for example:
 $71 \div 8 = 8 \text{ r } 7$

Unit 9.16

- 1 (a) 20 (b) 50
 (c) 40 (d) 200
 (e) 500 (f) 400
 (g) 110 (h) 210
- 2 149 r 1, 100, 40, 9 r 1, 149 (books), 1 left over
- 3 (a) $637 \div 3 = 212 \text{ r } 1$
 (b) $665 \div 5 = 133$
 (c) $738 \div 6 = 123$
- 4 (a) 134
 (b) 122 r 2
 (c) 116 r 6
- 5 (a) $(266 - 62) \div 6 = 34$ (apples)
 (b) $100 \times 4 = 400$ (books) $400 \div 5 = 80$ (books)
- 6 $\blacktriangle = 9$

Unit 9.17

- 1 (a) 20 (b) 100
 (c) 30 (d) 13
 (e) 300 (f) 23
 (g) 92 (h) 150
- 2 (a) 6 (b) 6
 (c) 10 (d) 6
 (e) 8 (f) 5
- 3

$$\begin{array}{r} \boxed{3} \boxed{1} \\ 6 \overline{) 189} \\ \underline{18} \\ 9 \\ \underline{9} \\ 0 \end{array}$$

... $\boxed{3} \times \boxed{6}$

$$\begin{array}{r} \boxed{6} \\ \underline{6} \\ 0 \end{array}$$

... $\boxed{1} \times \boxed{6}$

- 4 (a) 208 (b) 117
 (c) 160 r 1 (d) 1409
- 5 (a) 109 r 2 (b) 81 r 7
 (c) 70 r 6
- 6 (a) $4200 \div 7 = 600$ (mosquitoes)
 (b) (i) $480 \div 5 = 96$ (toy cars)
 (ii) $96 \div 8 = 12$ (toy cars)
- 7 Divided by 2 and the remainder is 0:
 630, 934, 616;
 Divided by 3 and the remainder is 1:
 934, 616, 373;
 Divided by 7 and the remainder is 5:
 299
- 8 Omid did it faster.
Method I: Omid's speed per hour:
 $304 \div 4 = 76$ (apples);
 Jenna's speed per hour: $36 \times 2 = 72$ (apples), $76 > 72$;
Method II: Jenna picked:
 $36 \times 2 \times 4 = 288$ (apples) in 4 hours;
 Omid picked: 304 apples in 4 hours.
 $304 > 288$

Unit 9.18

- 1 (a) 128 (b) 7254
- 2 (a) $663 \div 7 = 94 \text{ r } 5$
- 3 (a) 126 r 2 (b) 140 r 3
(c) 101 r 2 (d) 75
(e) 150 (f) 102 r 1
- 4 (a) 38 (b) 54
(c) 2100 (d) 48
- 5 (a) ✓ (b) ✗
(c) ✗ (d) ✗
- 6 Answers may vary, for example,
Plan I: 18 (pots) 28 (rows)
 $18 \times 28 = 504$
Plan II: 24 (pots) 21 (rows)
 $24 \times 21 = 504$
Plan III: 36 (pots) 14 (rows)
 $36 \times 14 = 504$
- 7 $80 \div 2 - 1 = 39$ (pots)

Unit 9.19

- 1 (a) 5 r 2 (b) 4 r 5
(c) 5 r 3 (d) 3 r 2
(e) 8 r 4 (f) 7 r 5
(g) 6 r 1 (h) 8 r 2
- 2 (a) 123 3 (b) $83 \times 3 + 2 = 251$
(c) 3 (d) 1 1 0
- 3 (a) $140 \div 6 = 23$ (boxes) r 2 (kg),
 $23 + 1 = 24$ (boxes)
(b) $29 \div 7 = 4$ (boats) r 1 (child),
 $4 + 1 = 5$ (boats) $32 \div 7 = 4$ (boats)
r 4 (children), $4 + 1 = 5$ (boats)
 $(29 + 32) \div 7 = 8$ (boats) r 5
(children), $8 + 1 = 9$ (boats)
(c) $50 \div 8 = 6$ (pencil boxes) r 2 (pounds)
(d) (i) $147 \div 8 = 18$ (exercise books) r 3
(pieces)
(ii) $8 - 3 = 5$ (pieces)

- 4 $750 \div 3 = 250$ (kg)
- 5 Yes (Hint: When sawing a piece of wood into 2 pieces, it is sawed once. Thus, when sawing the wood into 7 pieces, it is sawed 6 times. $(7 - 1) \times 5 = 30$ minutes)

Unit 9.20

- 1 (a) 63 (b) 16
(c) 32 (d) 80
(e) 1200 (f) 80
(g) 250 (h) 15
(i) 91 (j) 64
(k) 30 (l) 72
- 2 £42 £34 100 boxes
- 3 (a) Unit price \times Quantity = Total price
(b) Total price \div Unit price = Quantity
(c) Total price \div Quantity = Unit price
- 4 $105 \times 4 = 420$ (pounds)
- 5 $30 \times 3 = 90$ (pounds); $24 \times 8 = 192$ (apples)
- 6 (a) $660 \times 6 = 3960$
(b) $660 \div 6 = 110$
(c) $8 \times 402 + 7 = 3223$
- 7 $768 \div 8 = 96$ (boxes)
- 8 $(12 - 1) \times 6 = 66$ (metres)
- 9 The 16th tree

- 2 (a) 1104 (b) 130
(c) 102 r 1
- 3 (a) 1228 (b) 228
(c) 275
- 4 (a) $520 \div 4 = 130$
(b) $(38 \times 4) + 99 = 251$
(c) $192 \times 7 + 2 = 1346$
(d) $69 \div 3 = 23$
- 5 (a) 240 300 300 (answers may vary)
(b) 9900
(c) 20, 12, 138, 100, 20, 6, 504
(d) tens 2
(e) 5 4
(f) 165
(g) 30
(h) 8 135
(i) 3
- 6 5200 pounds
- 7 $634 \div 8 = 79 \text{ r } 2$
- 8 $741 \div 9 = 82$ (books) r 3 (pieces); $9 - 3 = 6$ (pieces)
- 9 $200 - 200 \div 5 = 160$ (kg)
- 10 $(400 - 260) \div 2 = 70$ (flowers)
- 11 $35 - 252 \div 9 = 7$ (boxes)
- 12 $24 \times 4 = 96$ (kg); $96 - 24 = 72$ (kg)
- 13 9

Chapter 9 test

- 1 (a) 240 (b) 1600
(c) 20 (d) 101
(e) 1800 (f) 5
(g) 64 (h) 3
(i) 545 (j) 50
(k) 50 (l) 300
(m) 900 (n) 90
(o) 28 (p) 15

Chapter 10 Let's practise geometry

Unit 10.1

- 1 (a) 4 (b) 6
(c) 7 (d) 5
- 2 (a) ✗ (b) ✓
(c) ✓ (d) ✓
- 3 (a) C (b) D (c) D
- 4 (a) 4, 0 (b) 4, 4
(c) 3, 1 (d) 3, 0
(e) 4, 4 (f) 3, 0
(g) 3, 1 (h) 5, 0
- 5 Drawing should show
(a) An angle of 90°
(b) An angle between 0° and 90°
(c) An angle between 90° and 180°

- 6 Answers may vary, for example, a vertical line from the top left vertex down to the base
- 7 5

Unit 10.2

- 1 Lines drawn to link: 'Horizontal lines' to 'Lines that run from left to right' to the diagram with horizontal lines; 'Vertical lines' to 'Lines that run from top to bottom' to the diagram with vertical lines
- 2 (a) Vertical lines: 1 3;
Horizontal lines: 2 4
(b) Vertical line: 4; Horizontal line: 1

- 3 Correctly labelled and listed vertical and horizontal lines
- 4 (a) ✗ (b) ✗
(c) ✓ (d) ✓
- 5 Answers may vary







Unit 10.3

- 1 Lines drawn to link: 'Perpendicular lines' to 'Lines that meet at a right angle' to the diagram with perpendicular lines; 'Parallel lines' to 'Lines that will never meet' to the diagram with parallel lines
- 2 Correctly labelled and listed parallel and perpendicular lines, and 'none' correctly shown

Answers

- 3 (a) vertical parallel
 (b) horizontal parallel
 (c) perpendicular
 (d) perpendicular
 (e) perpendicular
- 4 (a) ✓ (b) X
 (c) ✓ (d) X
- 5 Answers may vary

Unit 10.4

1	Is it a 2-D or 3-D shape?	What is the name of the shape?	If it is a 2-D shape, is it a symmetrical figure?
	2-D	triangle	no
	3-D	cylinder	
	2-D	square	yes
	3-D	cuboid	
	2-D	hexagon	yes
	3-D	pyramid	

- 2 Correct drawings of any
 (a) rectangle
 (b) pentagon
 (c) octagon
- 3 Correct drawings of the shapes as described (answers may vary)
- 4 A cube
- 5 A triangular prism

Unit 10.5

- 1 (a) 100 (b) 10
 (c) 1000 (d) 50
 (e) 150 (f) 7
 (g) 130 (h) 226
 (i) 3 (j) 90

- 2 (a) 4 (b) 110
 (c) 6, 4
- 3 (a) cm (b) mm
 (c) m (d) m
 (e) mm mm
- 4 (a) > (b) >
 (c) > (d) <
 (e) < (f) =
 (g) = (h) =
- 5 (a) 300 mm < 100 cm < 340 cm < 11 m
 98 cm < 12 m
 (b) 490 mm < 4 m 90 cm < 600 cm < 50 m
- 6 (a) 7 m 45 mm
 (b) 90 cm
- 7 (a) 145 cm or 1m 45 cm
 (b) 2 m 91 cm or 291 cm

Unit 10.6

- 1 Answers may vary
- 2 (a) 14 cm (b) 16 cm
 (c) 20 cm (d) 24 cm
- 3 (a) 17 cm (b) 17 mm
 (c) 26 m
- 4 900 m
- 5 11 ways, 10 cm

Unit 10.7

- 1 (a) 20 cm (b) 18 cm
 (c) 22 cm (d) 22 cm
- 2 (a) 38 cm (b) 36 cm
 (c) 475 mm (d) 40 mm
- 3 (a) 110 mm (b) 112 mm
 (c) 95 mm (d) 107 mm
- 4 64 cm

- 5 no; Shape 1 and Shape 2 share the same curve connecting A and B, and the other parts of their perimeters are equal because the figure is a rectangle
- 6 (a) 66 mm (b) 300 mm

Chapter 10 test

- 1 Angles: 1 2 6 8; Right angle: 2
- 2 (a) ✓ (b) ✓
 (c) ✓ (d) X
 (e) ✓ (f) X
 (g) ✓ (h) X
- 3 (a) vertical parallel
 (b) horizontal parallel
 (c) perpendicular
 (d) perpendicular
 (e) perpendicular
- 4 (a) 800 (b) 1000
 (c) 90 (d) 5
 (e) 1000 (f) 10
 (g) 250 (h) 566
 (i) 8 80 (j) 9
- 5 (a) C (b) D
 (c) A (d) C
- 6 6
- 7 Correct drawings of the shapes as described (answers may vary)
- 8 20 m
- 9 (a) 128 mm
 (b) 101 mm
 (c) 109 mm
- 10 52 cm
- 11 1620 m

End of year test

- 1 (a) 800 (b) 60
 (c) 120 (d) 6
 (e) 600 (f) 97
 (g) 90 (h) 110
 (i) 61 (j) 0
 (k) 70 (l) 205
- 2 (a) $\frac{4}{5}$ (b) $\frac{1}{3}$
 (c) $\frac{5}{6}$ (d) $\frac{8}{11}$
 (e) 0 (f) $\frac{4}{7}$
- 3 (a) C (b) D
 (c) B (d) D
- 4 (a) 100 1000
 (b) (i) kg
 (ii) seconds
 (iii) pounds
 (iv) days
 (c) $\frac{1}{4}$
 (d) 6, 8
 (e) 1000, 988, 908, 857, 799
 (f) 7, 27
 (g) 366, 52, 2
- 5 (a) 739 (b) 339
 (c) 409 (d) 834
 (e) 992 (f) 68
- 6 (a) 12
 (b) 2 3 5 6
 (c) 1 4 7 8
- 7 (a) 52 m
 (b) 76 m
- 8 (a) 180 - 125 = 55 (cm)
 (b) 9 × 5 + 6 = 51 (sweets)
 (c) 287 ÷ 7 = 41 (metres)
 (d) 152 × 2 - 16 = 288 (girls)
 (e) (i) Correctly drawn and labelled bar chart showing the data in the table
 (ii) 4, 2, 6
 (iii) 116
 (iv) Answer may vary