New Wave
Number and Algebra (Year 4)
STUDENT WORKBOOK ANSWERS

N&PV – 1

Page 2 Australian postcodes – even or odd?

1.

		Postcode	Odd/ even pattern	The sum of four digits	Odd or Even
Victorian suburb/town	Abbeyard	3737	OOOO	20	even
	Abbotsford	3067	OEEO	16	even
	Aberfeldie	3040	OEEO	7	odd
	Aberfeldy	3825	OEEO	18	even
	Acheron	3714	OOEE	15	odd
NSW suburb/town	Aarons Pass	2850	EEOO	15	odd
	Abbotsbury	2176	EOOE	16	even
	Abbotsford	2046	EEEE	12	even
	Abercrombie	2795	EOOO	23	odd
	Abercrombie River	2795	EOOO	23	odd
QLD suburb/town	Abbeywood	4613	EEOO	14	even
	Abbotsford	4670	EEOE	17	odd
	Abercorn	4627	EEEO	19	odd
	Abergowrie	4850	EEOE	17	odd
	Abingdon Downs	4871	EEOO	20	even
WA suburb/town	Abba River	6280	EEEE	16	even
	Abbey	6280	EEEE	16	even
	Acton Park	6280	EEEE	16	even
	Adamsvale	6375	EOOO	21	odd
	Agnew	6435	EEOO	18	even

2. Answers will vary – teacher check

Page 3 Even phone numbers – or are they odd?

Teacher check

Page 4 Four-digit soup

Teacher check

Page 5 Write the 6! and write them in order!

1. 14, 16, 18, 20, 22, 24
2. 193, 195, 197, 199, 201, 203
3. 40, 42, 44, 46, 48, 50
4. 73, 75, 77, 79, 81, 83
5. 314, 316, 318, 320, 322, 324
6. 599, 601, 603, 605, 607, 609
7. 1710, 1712, 1714, 1716, 1718, 1720
8. 1207, 1209, 1211, 1213, 1215, 1217
9. 9098, 9100, 9102, 9104, 9106, 9108
10. (a) 188, 190, 192, 194, 196, 198
(b) 2002, 2004, 2006, 2008, 2010, 2012
(c) 662, 664, 666, 668, 670, 672
(d) 264, 266, 268, 270, 272, 274
(e) 820, 822, 824, 826, 828, 830
(f) 412, 414, 416, 418, 420, 422

Page 6 Just keep circling

1. 404, 518, 744 (a) 48
2. 444, 108, 28 (a) 28
3. 193, 607 (a) 53
4. 881 (a) 300
5. 1455, 507, 923, 577, 919, 121 (a) 96
6. 411, 281, 117, 263, 95 (a) 95

Page 7 Prove the rule!

Teacher check

N&PV – 2

Page 8 Football crowds

1.

Team	Attendance average
Cockatoos	58 410
Pumas	48 724
Doughnuts	46 735
Kookaburras	45 994
Falcons	37 710
Cardinals	36 683
Superstars	36 073
Angels	35 444
Frisbees	33 827
Hawks	32 634
Surfers	31 609
Dinosaurs	23 732
Wombats	23 428
Cygnets	21 497
Pirates	20 771
Leopards	20 491
Gorillas	13 676
Lifeguards	12 775

2. Cockatoos
3. Cardinals
4. Lifeguards

Page 9 Unlucky 13!

Teacher check

Page 10 New postcodes

Teacher check

Page 11 What's in a 7?

1.

Number	7 is worth …	Wipe out 7
37 891	7000	30 891
11 709	700	11 009
71 469	70 000	1469
7 320	7000	320
45 697	7	45 690
20 073	70	20 003
23 765	700	23 065
67 009	7000	60 009
73 550	70 000	3550
17 080	7000	10 080
43 667	7	43 660
18 701	700	18 001
14 678	70	14 608
37 663	7000	30 663
57 012	7000	50 012
61 070	70	61 000

2. Teacher check

Page 12 Ten less … ten more

Ten less		Ten more
1879	**1889**	1899
9089	**9099**	9109
9659	**9669**	9679
991	**1001**	1011
1073	**1083**	1093
6092	**6102**	6112
8097	**8107**	8117
6589	**6599**	6609
19 899	**19 909**	19 919
11 993	**12 003**	12 013
22 001	**22 011**	22 021
10 091	**10 101**	10 111
88 991	**89 001**	89 011
6992	**7002**	7012
70 091	**70 101**	70 111
95 009	**95 019**	95 029
72 930	**72 940**	72 950
49 995	**50 005**	50 015
40 993	**41 003**	41 013
38 191	**38 201**	38 211

Page 13 Now a hundred less and a hundred more

Hundred less		Hundred more
1789	**1889**	1999
8999	**9099**	9199
9569	**9669**	9769
901	**1001**	1101
983	**1083**	1183
6002	**6102**	6202
8007	**8107**	8207
6499	**6599**	6699
19 809	**19 909**	20 009
11 903	**12 003**	12103
21 911	**22 011**	22 111
10 001	**10 101**	10 201
88 901	**89 001**	89 101
6902	**7002**	7102
70 001	**70 101**	70 201
94 919	**95 019**	95 119
72 840	**72 940**	73 040
49 905	**50 005**	50 105
40 903	**41 003**	41 103
38 101	**38 201**	38 301

N&PV – 3

Page 14 Wipe out 7 – It's for real!

	Value of 7	7 wiped out
55 789	700	55 089
78 029	70 000	8029
37 661	7000	30 661
19 070	70	19 000
70 012	70 000	12
56 807	7	56 800
33 744	700	33 044
98 765	700	98 065
40 379	70	40 309
22 753	700	22 053
78 429	70 000	8429
27 029	7000	20 029
38 471	70	38 401
14 070	70	14 000
70 012	70 000	12
84 708	700	84 008
87 644	7000	80 644
92 748	700	92 048
76 899	70 000	6899
27 088	7000	20 088

	Value of 7	7 wiped out
43 874	70	43 804
71 990	70 000	1990
33 070	70	33 000
29 971	70	29 901
67 880	7000	60 880
79 624	70 000	9624
57 660	7000	50 660
75 401	70 000	5401
44 709	700	44 009
76 901	70 000	6901
43 274	70	43 204
71 960	70 000	1960
87 090	7000	80 090
29 971	70	29 901
70 220	70 000	220
29 724	700	29 024
16 470	70	16 400
87 401	7000	80 401
44 007	7	44 000
94 701	700	94 001

Page 15 Hop to it – there's work to be done!

1. (a) 95 456 (b) 109 465 (c) 67 457
(d) 45 124 (e) 22 742 (f) 35 227
(g) 11 970 (h) 6054 (i) 82 926
(j) 92 275 (k) 96 311 (l) 44 919
(m) 32 835 (n) 18 017 (o) 23 274
(p) 20 574

2. (a) 47 (b) 810 (c) 90 (d) 71
(e) 12 (f) 23 (g) 54 (h) 120

3. (a) 22 (b) 45 (c) 39 (d) 37
(e) 18 (f) 24 (g) 58 (h) 92

Page 16 Hop to it again – this time there are more!

1. (a) 87 456 (b) 96 765 (c) 155 457
(d) 185 726 (e) 18 722 (f) 6767
(g) 7970 (h) 17 996 (i) 97 766
(j) 62 875 (k) 96 597 (l) 95 359
(m) 46 829 (n) 38 017 (o) 59 334
(p) 18 576

2. (a) 67 (b) 890 (c) 90 (d) 79
(e) 98 (f) 87 (g) 56 (h) 980

3. (a) 88 (b) 65 (c) 53 (d) 17
(e) 98 (f) 86 (g) 40 (h) 96

Page 17 It's all about numbers – really it is!

1. (a) 40 000 (b) 200 (c) 80 (d) 2000
(e) 10 000 (f) 6000 (g) 4 (h) 40
(i) 1000 (j) 900 (k) 20 000 (l) 80 000
(m) 300 (n) 3000 (o) 30

2. (a) 9642 (b) 1759 (c) 3837 (d) 4545
(e) 1190 (f) 4168 (g) 8414 (h) 3465

3. (a) 4356 (b) 2761 (c) 49 610
(d) 30 654 (e) 64 958

Page 18 Solve these word problems

1. 3018 **2.** $11.15 **3.** $3229
4. 34 935 **5.** $7.80 **6.** 3790
7. $322 **8.** $23.35 **9.** 3844
10. $1044 **11.** Yes **12.** $433.85

Page 19 Numbers and words

1. (a) Two thousand, nine hundred and eighty–three
(b) Thirty-eight thousand, nine hundred and ninety–seven
(c) Thirty-three thousand, nine hundred and nine
(d) Twenty-seven thousand, one hundred and twelve
(e) Fourteen thousand, eight hundred and thirty–seven

2. (a) 100 (b) 100 (c) 100 (d) 100
(e) 1000 (f) 100 (g) 1000 (h) 100
(i) 10 (j) 100 (k) 90 000 (l) 400
(m) 16 000 (n) 20

N&PV – 4

Page 20 Who is the odd man out?

1. (a) **250**, 248, 252 (b) **246**, 243, 252
(c) **164**, 162, 168 (d) **121**, 119, 126
(e) **110**, 108, 112 (f) **244**, 240, 246
(g) **124**, 120, 128 (h) **118**, 117, 120
(i) **151**, 144, 153

Page 21 Your time starts now

1. (a) 92, 95, 98, 101, 104, 107
(b) 129, 135, 141, 147, 153, 159
(c) 309, 318, 327, 336, 345, 354
(d) 123, 127, 131, 135, 139, 143
(e) 217, 225, 233, 241, 249, 257
(f) 99, 106, 113, 120, 127, 134
(g) 158, 161, 164, 167, 170, 173
(h) 195, 201, 207, 213, 219, 225
(i) 179, 183, 187, 191, 195, 199
(j) 492, 501, 510, 519, 528, 537

2. (a) 152 (b) 230 (c) 165 (d) 204
(e) 217 (f) 191 (g) 74 (h) 61

Page 22 Keep counting!

3s 18, 21, 24, 27, 30, 33, 36
51, 54, 57, 60, 63, 66, 69
68, 71, 74, 77, 80, 83, 86

4s 28, 32, 36, 40, 44, 48, 52
88, 92, 96, 100, 104, 108, 112
121, 125, 129, 133, 137, 141, 145

6s 30, 36, 42, 48, 54, 60, 66
51, 57, 63, 69, 75, 81, 87
107, 113, 119, 125, 131, 137, 143

7s 35, 42, 49, 56, 63, 70, 77
80, 87, 94, 101, 108, 115, 122
168, 175, 182, 189, 196, 203, 210

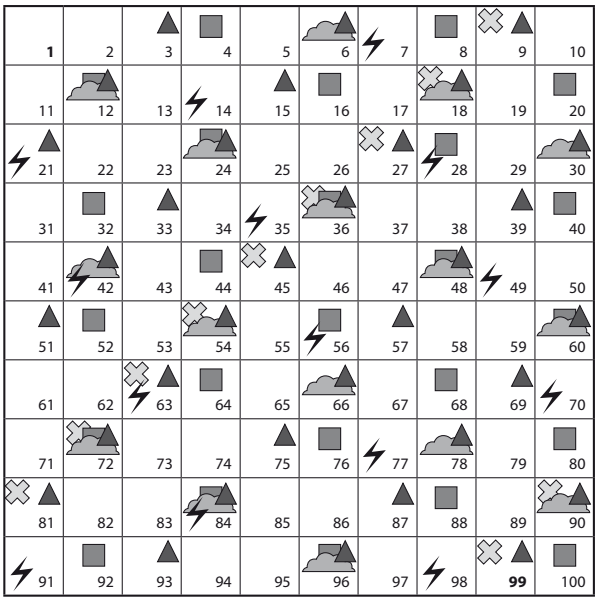
8s 40, 48, 56, 64, 72, 80, 88
93, 101, 109, 117, 125, 133, 141
235, 243, 251, 259, 267, 275, 283

9s 36, 45, 54, 63, 72, 81, 90
93, 102, 111, 120, 129, 138, 147
358, 367, 376, 385, 394, 403, 412

Page 23 Number patterns

1.–2. See diagram below

red ▲, orange ■, pink ☁, gold ϟ, blue ✖



3. 36, 72, 84

Page 24 Backwards counting!

3s 198, 195, 192, 189, 186, 183, 180
133, 130, 127, 124, 121, 118, 115
50, 47, 44, 41, 38, 35, 32

4s 150, 146, 142, 138, 134, 130, 126
97, 93, 89, 85, 81, 77, 73
280, 276, 272, 268, 264, 260, 256

6s 102, 96, 90, 84, 78, 72, 66
215, 209, 203, 197, 191, 185, 179
171, 165, 159, 153, 147, 141, 135

7s 126, 119, 112, 105, 98, 91, 84
186, 179, 172, 165, 158, 151, 144
87, 80, 73, 66, 59, 52, 45

8s 144, 136, 128, 120, 112, 104, 96
185, 177, 169, 161, 153, 145, 137
297, 289, 281, 273, 265, 257, 259

9s 72, 63, 54, 45, 36, 27, 18
139, 130, 121, 112, 103, 94, 85
304, 295, 286, 277, 268, 259, 250

Page 25 Keep counting – only 2 clues!

3s 25, 28, 31, 34, 37, 40, 43, 46
66, 69, 72, 75, 78, 81, 84, 87
108, 111, 114, 117, 120, 123, 126, 129

4s 132, 136, 140, 144, 148, 152, 156
385, 389, 393, 397, 401, 405, 409
1001, 997, 993, 989, 985, 981, 977

6s 204, 210, 216, 222, 228, 234, 240
375, 381, 387, 393, 399, 405, 411
107, 101, 95, 89, 83, 77, 71

7s 238, 245, 252, 259, 266, 273, 280
593, 600, 607, 614, 621, 628, 635
1033, 1026, 1019, 1012, 1005, 998, 991

8s 172, 180, 188, 196, 204, 212
1635, 1643, 1651, 1659, 1667, 1675, 1683
1887, 1879, 1871, 1863, 1855, 1847, 1839

9s 86, 95, 104, 113, 122, 131, 140
658, 667, 676, 685, 694, 703, 712
3113, 3104, 3095, 3086, 3077, 3068, 3059

N&PV – 5

Page 26 Number facts errors

1.

×	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	**5**	6	8	10	12	14	**13**	18	20
3	3	**7**	9	**11**	15	**17**	21	**23**	27	30
4	4	**10**	12	16	20	24	28	**33**	36	40
5	5	**12**	15	**21**	**26**	**31**	35	**42**	45	50
6	6	**14**	18	**25**	30	**35**	42	**49**	54	60
7	7	**15**	21	**29**	35	**43**	49	**55**	63	70
8	8	**17**	24	32	40	48	56	**65**	72	80
9	**18**	**26**	**35**	**44**	**53**	**58**	**62**	**71**	81	90
10	10	20	30	40	50	60	70	80	90	100

2. $9 \times 1 = 9$
$2 \times 2 = 4$, $3 \times 2 = 6$, $4 \times 2 = 8$, $5 \times 2 = 10$, $6 \times 2 = 12$, $7 \times 2 = 14$, $8 \times 2 = 16$, $9 \times 2 = 18$
$9 \times 3 = 27$
$3 \times 4 = 12$, $5 \times 4 = 20$, $6 \times 4 = 24$, $7 \times 4 = 28$, $9 \times 4 = 36$
$5 \times 5 = 25$, $9 \times 5 = 45$
$3 \times 6 = 18$, $5 \times 6 = 30$, $6 \times 6 = 36$, $7 \times 6 = 42$, $9 \times 6 = 54$
$9 \times 7 = 63$
$2 \times 8 = 16$, $3 \times 8 = 24$, $4 \times 8 = 32$, $5 \times 8 = 40$, $6 \times 8 = 48$, $7 \times 8 = 56$, $8 \times 8 = 64$, $9 \times 8 = 72$

Page 27 And the answer is …

1. How does a number speak?

2. Teacher check

Page 28 It's game on!

Player A	Player B	Winner and margin	Tally A	Tally B
7 × 4 = 28	*5 × 6 = 30*	*B by 2*		*+2*
9 × 4 = **36**	4 × 10 = **40**	**B by 4**		**+6**
7 × 8 = **56**	5 × 9 = **45**	**A by 11**	**+5**	
3 × 4 = **12**	2 × 7 = **14**	**B by 2**	**+3**	
3 × 7 = **21**	5 × 4 = **20**	**A by1**	**+4**	
6 × 6 = **36**	4 × 8 = **32**	**A by 4**	**+8**	
7 × 7 = **49**	8 × 6 = **48**	**A by 1**	**+9**	
9 × 9 = **81**	10 × 8 = **80**	**A by 1**	**+10**	
4 × 12 = **48**	5 × 10 = **50**	**B by 2**	**+8**	
6 × 12 = **72**	7 × 11 = **77**	**B by 5**	**+3**	
8 × 8 = **64**	6 × 12 = **72**	**B by 8**		**+5**
9 × 6 = **54**	7 × 8 = **56**	**B by 2**		**+7**
48 ÷ 4 = **12**	54 ÷ 3 = **18**	**B by 6**		**+13**
66 ÷ 11 = **6**	36 ÷ 9 = **4**	**A by 2**		**+11**
96 ÷ 8 = **12**	22 ÷ 11 = **2**	**A by 10**		**+1**
55 ÷ 5 = **11**	44 ÷ 2 = **22**	**B by 11**		**+12**
28 ÷ 4 = **7**	35 ÷ 5 = **7**	**equal**		**+12**
30 ÷ 10 = **3**	55 ÷ 5 = **11**	**B by 8**		**+20**
42 ÷ 6 = **7**	81 ÷ 9 = **9**	**B by 2**		**+22**
33 ÷ 11 = **3**	48 ÷ 12 = **4**	**B by 1**		**+23**
15 ÷ 3 = **5**	18 ÷ 2 = **9**	**B by 4**		**+27**

The winner is B.

Page 29 Facts shape the world

Teacher check

Page 30 Divide and conquer!

24 ÷ 6 = 5	36 ÷ 6 = 7	18 ÷ 3 = 7	32 ÷ 4 = 9	48 ÷ 8 = 6	63 ÷ 7 = 9	30 ÷ 3 = 9	50 ÷ 5 = 9	64 ÷ 8 = 6	32 ÷ 8 = 6
72 ÷ 9 = 7	54 ÷ 9 = 7	36 ÷ 9 = 6	56 ÷ 7 = 8	16 ÷ 8 = 2	54 ÷ 9 = 6	18 ÷ 9 = 2	40 ÷ 4 = 9	16 ÷ 2 = 6	18 ÷ 9 = 3
63 ÷ 9 = 11	40 ÷ 4 = 11	63 ÷ 9 = 7	21 ÷ 7 = 3	81 ÷ 9 = 9	54 ÷ 9 = 6	64 ÷ 8 = 8	63 ÷ 7 = 9	27 ÷ 9 = 4	36 ÷ 4 = 8
32 ÷ 4 = 3	42 ÷ 6 = 7	49 ÷ 7 = 7	36 ÷ 9 = 9	32 ÷ 8 = 4	72 ÷ 8 = 9	63 ÷ 7 = 6	90 ÷ 9 = 10	45 ÷ 9 = 5	20 ÷ 10 = 3
24 ÷ 4 = 7	54 ÷ 6 = 9	30 ÷ 5 = 6	36 ÷ 6 = 6	35 ÷ 7 = 5	24 ÷ 8 = 3	80 ÷ 8 = 10	42 ÷ 7 = 6	36 ÷ 9 = 4	8 ÷ 2 = 6
16 ÷ 4 = 5	45 ÷ 9 = 7	21 ÷ 7 = 6	72 ÷ 9 = 8	81 ÷ 9 = 6	18 ÷ 9 = 3	28 ÷ 7 = 4	32 ÷ 8 = 5	45 ÷ 9 = 6	35 ÷ 5 = 6
72 ÷ 9 = 9	63 ÷ 9 = 6	24 ÷ 4 = 6	36 ÷ 9 = 6	48 ÷ 6 = 8	56 ÷ 8 = 7	40 ÷ 8 = 6	27 ÷ 9 = 3	24 ÷ 8 = 4	20 ÷ 2 = 7
21 ÷ 7 = 6	56 ÷ 8 = 7	14 ÷ 2 = 6	49 ÷ 7 = 8	63 ÷ 9 = 8	28 ÷ 7 = 6	64 ÷ 8 = 6	34 ÷ 9 = 5	18 ÷ 6 = 3	48 ÷ 9 = 6
30 ÷ 3 = 8	27 ÷ 3 = 7	14 ÷ 7 = 2	16 ÷ 4 = 5	28 ÷ 7 = 6	40 ÷ 4 = 8	10 ÷ 2 = 6	45 ÷ 9 = 5	32 ÷ 8 = 5	28 ÷ 7 = 6
49 ÷ 7 = 6	30 ÷ 6 = 6	24 ÷ 3 = 9	28 ÷ 4 = 7	63 ÷ 9 = 9	42 ÷ 6 = 6	18 ÷ 3 = 6	27 ÷ 9 = 4	45 ÷ 9 = 6	81 ÷ 9 = 8

Page 31 Star boulevard

Teacher check

Page 32 Everybody wants to work

1.

Rate and hours per day	How much over … 2 days?	5 days?	10 days?	20 days?
Suzie earns $6.60 per hour and works for 7 hours each day	$92.40	$231	$462	$924
Ben earns $5.45 per hour and works for 9 hours each day	$98.10	$245.25	$490.50	$981
Hugo earns $6.10 per hour and works for 6 hours each day	$73.20	$183	$366	$732
Jake earns $5.90 per hour and works for 11 hours each day	$129.80	$324.50	$649	$1298
Abbie earns $9.50 per hour and works for 5 hours each day	$95	$237.50	$475	$950

2. (a) Jake, Ben, Abbie, Suzie, Hugo

(b) $566

Page 33 Hiking gear for hire

1.

Gear	2-day hire	3-day hire	5-day hire	7-day hire
Waterproof jacket @ $3.55 per day	$7.10	$10.65	$17.75	$24.85
GPS tracker @ $8.60 per day	$17.20	$25.80	$43	$60.20
Sleeping bag @ $4.95 per day	$9.90	$14.85	$24.75	$34.65
Tent @ $11.25 per day	$22.50	$33.75	$56.25	$78.75
Hiking boots @ $6.80 per day	$13.60	$20.40	$34	$47.60

2. (a) Waterproof jacket – yes, GPS tracker – yes

(b) Waterproof jacket – $3.85, GPS tracker – $5.20

Page 34 Summer is here! – bring out the toys!

1.

Gear	2-hour hire	3-hour hire	4-hour hire	All-day hire
Noodle lilo @ $4.55 per hour	$9.10	$13.65	$18.20	$26.70
Giant crocodile @ $3.60 per hour	$7.20	$10.80	$14.40	$28.80
Giant inflatable seahorse @ $6.95 per hour	$13.90	$20.85	$27.80	$34.75
Giant water pistols @ $2.85 per hour	$5.70	$8.55	$11.40	$28.65
Noodle beanbags @ $5.80 per hour	$11.60	$17.40	$23.20	$34.80

2.–3. Teacher check

4. $201.60

5. Teacher check

Page 35 Car wash coffee

1.

Job and pay rate	30 min	1.5 hours	2.5 hours	5.5 hours
Waiter/waitress @ $14.60 per hour	$7.30	$21.90	$36.50	$80.30
Table clearer @ $13.50 per hour	$6.75	$20.25	$33.75	$74.25
Dish washer @ $6.95 per hour	$3.48	$10.43	$17.38	$38.23
Car washer @ $12.90 per hour	$6.45	$19.35	$32.25	$70.95
Car vacuumer @ $15.80 per hour	$7.90	$23.70	$39.50	$86.90
Coffee barista @ $16.10 per hour	$8.05	$24.15	$40.25	$88.55
Cashier @ $12.70 per hour	$6.35	$19.05	$31.75	$69.85
Kitchen hand @ $11.60 per hour	$5.80	$17.40	$29	$63.80
Drain clearer @ $10.90 per hour	$5.45	$16.35	$27.25	$59.95

2. (a) $28.60 (b) $9.35 (c) $31.62

Page 36 I know my 3s, 4s, 5s and 6s

4 × 3 = 12	4 × 6 = 24	7 × 3 = 21
36 ÷ 6 = 6	4 × 5 = 20	16 ÷ 4 = 4
6 × 4 = 24	30 ÷ 5 = 6	6 × 6 = 36
28 ÷ 4 = 7	5 × 3 = 15	5 × 5 = 25
5 × 4 = 20	30 ÷ 5 = 6	2 × 4 = 8
40 ÷ 4 = 10	27 ÷ 3 = 9	2 × 5 = 10
10 × 3 = 30	10 × 6 = 60	3 × 6 = 18
3 × 5 = 15	24 ÷ 3 = 8	6 × 3 = 18
5 × 6 = 30	8 × 5 = 40	18 ÷ 3 = 6
12 ÷ 3 = 4	54 ÷ 6 = 9	7 × 6 = 42
9 × 6 = 54	8 × 4 = 32	40 ÷ 5 = 8
24 ÷ 4 = 6	42 ÷ 6 = 7	9 × 3 = 27
18 ÷ 6 = 3	35 ÷ 5 = 7	1 × 5 = 5
8 × 3 = 24	15 ÷ 5 = 3	21 ÷ 3 = 7
7 × 5 = 35	8 × 6 = 48	9 × 4 = 36

Page 37 I know my 7s, 8s, 9s and 10s

8 × 7 = 56	3 × 9 = 27	7 × 7 = 49
72 ÷ 8 = 9	2 × 10 = 20	16 ÷ 2 = 8
3 × 8 = 24	63 ÷ 7 = 9	9 × 9 = 81
28 ÷ 4 = 7	10 × 7 = 70	10 × 10 = 100
4 × 8 = 32	54 ÷ 6 = 9	11 × 8 = 88
80 ÷ 8 = 10	36 ÷ 4 = 9	0 × 10 = 0
10 × 7 = 70	10 × 9 = 90	5 × 9 = 45
9 × 10 = 90	32 ÷ 4 = 8	9 × 7 = 63
7 × 9 = 63	8 × 10 = 80	72 ÷ 8 = 9
16 ÷ 2 = 8	99 ÷ 11 = 9	9 × 9 = 81
4 × 9 = 36	9 × 8 = 72	80 ÷ 10 = 8
27 ÷ 3 = 9	70 ÷ 10 = 7	9 × 7 = 63
35 ÷ 5 = 7	14 ÷ 2 = 7	1 × 10 = 10
8 × 7 = 56	21 ÷ 3 = 7	63 ÷ 9 = 7
7 × 10 = 70	9 × 9 = 81	8 × 8 = 64

F&D 1

Page 38 I just want my fair share

1.

Name	Fraction of ticket cost	$ spent on ticket	Simplest fraction	$ of the prize they receive
Bill	$\frac{3}{20}$	$9	$\frac{3}{20}$	$15 000
Sandra	$\frac{4}{20}$	$12	$\frac{1}{5}$	$20 000
Jai	$\frac{6}{20}$	$18	$\frac{3}{10}$	$30 000
Kim	$\frac{1}{20}$	$3	$\frac{1}{20}$	$5000
Ali	$\frac{2}{20}$	$6	$\frac{1}{10}$	$10 000
Benny	$\frac{2}{20}$	$6	$\frac{1}{10}$	$10 000
Guy	$\frac{1}{20}$	$3	$\frac{1}{20}$	$5000
Jack	$\frac{1}{20}$	$3	$\frac{1}{20}$	$5000

2.

Name	Fraction of ticket cost	$ spent on ticket	Simplest fraction	$ of the prize they receive
Bill	2/20	$7.50	1/10	$25 000
Sandra	1/20	$3.75	1/20	$12 500
Jai	1/20	$3.75	1/20	$12 500
Kim	1/20	$3.75	1/20	$12 500
Ali	1/20	$3.75	1/20	$12 500
Benny	1/20	$3.75	1/20	$12 500
Guy	10/20	$37.50	1/2	$125 000
Jack	3/20	$11.25	3/20	$37 500

Page 39 Build your own word wall

Teacher check

Page 40 Use your new fraction wall

Teacher check

Page 41 It's an equivalence grid

1/4	2/3	1/2	3/6	6/10	2/3	4/6	6/8	3/4	1/4
3/6	4/6	1/3	3/6	1/4	1/2	1/3	2/3	2/3	4/6
1/2	3/4	2/3	1/2	4/6	1/3	1/4	1/4	3/4	6/8
3/4	3/5	6/10	3/6	3/5	1/2	3/6	4/6	2/3	2/8
4/6	6/8	1/3	6/8	3/4	1/3	4/6	6/10	1/2	1/4
3/6	3/5	1/2	4/6	2/3	1/3	3/4	3/6	3/5	3/4
1/4	6/10	1/4	3/6	4/6	1/2	4/6	3/6	2/3	6/8
3/4	2/3	1/3	6/8	1/3	2/3	1/4	4/6	1/2	4/6
1/3	6/8	1/3	4/6	3/4	4/6	6/10	3/6	6/8	1/3
3/4	2/3	1/2	3/6	1/2	3/6	1/4	2/3	3/4	6/8

Page 42 More than one way to name a fraction

1. 2/6 or 1/3 **2.** 6/12 or 1/2 **3.** 2/8 or 1/4

4. 4/12 or 1/3 **5.** 3/9 or 1/3 **6.** 4/10 or 2/5

Page 43 Two sides to each fraction

1. (a) 4/12 or 1/3, 8/12 or 2/3
6/12 or 1/3, 6/12 or 1/2
4/12 or 1/3, 8/12 or 2/3

(b) 1/4, 3/4
2/4 or 1/2, 2/4 or 1/2
3/4, 1/4

(c) 2/12 or 1/6, 10/12 or 5/6
5/12, 7/12
4/12 or 1/3, 8/12 or 2/3
8/12 or 2/3, 4/12 or 1/3

(d) 3/8, 5/8
5/8, 3/8
4/8 or 1/2, 4/8 or 1/2
6/8 or 3/4, 2/8 or 1/4

(e) 4/5, 1/5 3/5, 2/5 2/5, 3/5

F&D 2

Page 44 Pizza, pizza and the great quarter eat-off!

Table 1 = 11/4, 2 3/4 pizzas
Table 2 = 18/4, 4 1/2 pizzas
Table 3 = 10/4, 2 1/2 pizzas
Table 4 = 10/4, 2 1/2 pizzas
Table 5 = 17/4, 4 1/4 pizzas
Table 6 = 11/4, 2 3/4 pizzas
Table 7 = 12/4, 3 pizzas
Table 8 = 16/4, 4 pizzas
Table 9 = 15/4, 3 3/4 pizzas
Table 10 = 9/4, 2 1/4 pizzas

Page 45 Who played the most footy?

1.

	Round										Total game time
	1	2	3	4	5	6	7	8	9	10	
Andy	1/4	1/2	0	1/2	1/4	1/4	3/4	3/4	1/2	0	**15/4 or 3 3/4**
Bruce	1/2	1/4	1/2	0	3/4	0	1/2	0	0	3/4	**13/4 or 3 1/4**
Callum	0	3/4	0	1/2	0	1/4	1/2	1/2	1/4	0	**11/4 or 2 3/4**
Dean	1/2	0	1/4	0	1/4	1/2	1/4	0	3/4	1/2	**12/4 or 3**
Eddie	1/4	0	1/2	1/2	3/4	0	3/4	0	1/2	0	**13/4 or 3 1/4**
Frankie	1/2	1/4	0	1/2	0	1/2	0	1/4	0	1/4	**9/4 or 2 1/4**
Gene	3/4	0	1/4	0	1/2	1/2	1/2	0	1/2	0	**12/4 or 3**
Hugo	1/4	1/2	0	3/4	1/2	0	0	1/2	0	3/4	**13/4 or 3 1/4**
Ian	0	3/4	1/4	1/2	1/2	0	1/2	1/2	1/4	0	**13/4 or 3 1/4**

2.

	Round										Total game time
	1	2	3	4	5	6	7	8	9	10	
Andy	0	3/4	1/2	1/2	1/2	0	3/4	0	1/2	**1/2**	4
Bruce	1/2	1/4	1/4	1/4	1/4	1/4	1/4	1/2	1/2	**3/4**	3 3/4
Callum	0	1/2	1/2	1/2	1/2	1/2	1/4	1/4	1/4	**3/4**	4
Dean	1/2	1/2	1/2	1/2	1/2	0	3/4	3/4	3/4	**1/4**	5
Eddie	1/2	1/2	1/2	1/2	0	1/2	1/2	0	1/2	**3/4**	4 1/4
Frankie	0	1/2	1/4	1/4	1/4	1/2	1/2	1/2	1/4	**1/4**	3 1/4
Gene	0	1/2	1/2	1/2	1/2	0	0	1/2	1/2	**0**	3
Hugo	3/4	1/4	3/4	1/4	3/4	1/4	3/4	1/4	3/4	**1/4**	5
Ian	1/2	1/2	1/2	1/4	1/4	1/4	0	0	0	**3/4**	3

Page 46 You ate what?

1.

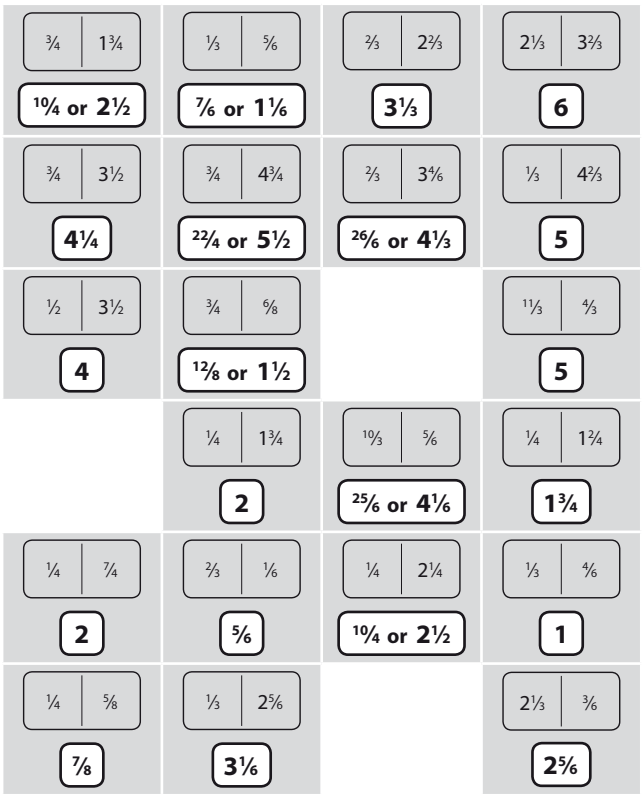
	Week 1	Week 2	Week 3	Week 4	Total
Albert	12/5	17/5	6/5	13/5	**48/5 = 9 bars 3 pieces**
Bennie	8/5	9/5	3/5	6/5	**26/5 = 5 bars 1 piece**
Callum	6/5	10/5	7/5	4/5	**27/5 = 5 bars 2 pieces**
Dana	9/5	2/5	2/5	5/5	**18/5 = 3 bars 3 pieces**
Edwina	5/5	7/5	8/5	3/5	**23/5 = 4 bars 3 pieces**
Freddie	10/5	11/5	6/5	6/5	**33/5 = 6 bars 3 pieces**
Georgie	11/5	1/5	2/5	8/5	**22/5 = 4 bars 2 pieces**
Harry	3/5	8/5	12/5	4/5	**27/5 = 5 bars 2 pieces**
India	4/5	12/5	1/5	7/5	**24/5 = 4 bars 4 pieces**
Jenni	3/5	9/5	7/5	4/5	**23/5 = 4 bars 3 pieces**
Kyle	11/5	10/5	2/5	5/5	**28/5 = 5 bars 3 pieces**
Luc	12/5	1/5	1/5	8/5	**22/5 = 5 bars 2 pieces**
Minnie	4/5	4/5	6/5	11/5	**25/5 = 5 bars**
Nara	5/5	1/5	16/5	15/5	**37/5 = 7 bars 2 pieces**

2. Albert, Nara, Freddie

3. Dana, Georgie, Luc

4. Minnie

Page 47 *A new type of dominoes*



Page 48 *That's egg stealing*

1. (a) 35⁄115 (b) 80⁄115 (c) Teacher check

2. (a) 22⁄88 or 11⁄44 or ¼ (b) 66⁄88 or 33⁄44 or ¾
(c) Teacher check

3. (a) 26⁄104 or 13⁄52 or ¼ (b) 78⁄104 or 36⁄52 or ¾
(c) Teacher check

4. (a) 29⁄87 (b) 58⁄87 (c) Teacher check

Page 49 *Mixed numbers*

3⅖ = 17⁄5	**9⁄4** = 2¼	**12⁄5** = 2⅖
10⁄3 = 3⅓	**11⁄2** = 5½	**21⁄5** = 4⅕
3¾ = 15⁄4	**5⅔** = 17⁄3	**7½** = 15⁄2
17⁄4 = 4¼	**19⁄3** = 6⅓	**16⁄2** = 8

F&D 3

Page 50 *The real champions*

1.

Position	Country	Distance — metres
1st	Kenya	8.23 m
2nd	South Africa	8.12 m
3rd	Italy	8.07 m
4th	Australia	7.36 m
5th	England	7.15 m
6th	France	6.58 m
7th	China	5.37 m
8th	USA	4.67 m
9th	Germany	4.55 m
10th	Iceland	4.17 m

2.

Position	Country	Time — seconds
1st	Kenya	43.08
2nd	South Africa	43.12
3rd	Australia	43.16
4th	Germany	43.57
5th	USA	43.87
6th	Italy	44.07
7th	England	44.12
8th	Iceland	44.17
9th	China	45.07
10th	France	46.53

Page 51 *The great radio dial*

FM position	Station	State	Frequency
1	Heart	TAS	107.3
2	SA FM	SA	107.1
3	Nova	QLD	106.9
4	B105	QLD	105.3
5	Triple M	VIC	105.1
6	2Day FM	NSW	104.1
7	4MBS	QLD	103.7
8	WA FM	WA	102.3
9	4ZZZ	QLD	102.1
10	Fox	VIC	101.9
11	7HO	TAS	101.7
12	WS FM	NSW	101.7
13	Sea FM	TAS	100.9
14	WOW FM	SA	100.5
15	Power FM	SA	100.3
16	SBS	WA	96.9
17	The Edge	NSW	96.1
18	Mix	WA	94.5
19	Bay	VIC	93.9
20	Nova	WA	93.7
21	Triple J	TAS	92.9
22	Fresh FM	SA	92.7
23	Smooth	VIC	91.5
24	2RRR	NSW	88.5

Page 52 *1st, 2nd, 3rd – can you do it?*

1.11, 1.1, 1.01	8.7, 8.17, 8.07
11.01, 11.0, 10.11	13.3, 13.11, 13.03
3.33, 3.3, 3.03	4.44, 4.41, 4.04
15.5, 15.1, 15.01	9.99, 9.1, 9.09
6.61, 6.16, 6.06	18.81, 18.8, 18.08
20.2, 20.11, 20.02	11.21, 11.11, 11.1
21.21, 21.11, 21.01	4.45, 4.44, 4.04

Page 53 Welcome to Flagtopia

Teacher check

Page 54 How much is shaded?

$^{47}/_{100}$, 47%	$^{73}/_{100}$, 73%	$^{60}/_{100}$, 60%
$^{33}/_{100}$, 33%	$^{90}/_{100}$, 90%	$^{15}/_{100}$, 15%
$^{8}/_{100}$, 8%	$^{82}/_{100}$, 82%	$^{55}/_{100}$, 55%
$^{61}/_{100}$, 61%	$^{28}/_{100}$, 28%	$^{67}/_{100}$, 67%

M&FM 1

Page 55 Coins, notes and change

1. (a) $2.05

(b) $50 using 4 notes = $20, $10, $10, $10

$50 using 5 notes = $10, $10, $10, $10, $10

$50 using 6 notes = $10, $10, $10, $10, $5, $5

$50 using 3 notes = $20, $20, $10

2. (a) $2.85

(b) $25 using 5 notes = $5, $5, $5, $5, $5

$25 using 7 notes and/or coins = $5, $5, $5, $5, $2, $2, $1

$25 using 6 notes and/or coins = $20, $1, $1, $1, $1, $1

$25 using 3 notes = $10, $10, $5

Page 56 Sausages, sausages and more sausages!

(a)

Sam's Sausages	Big Kev's Meat	Sausages 'R' Us
Deal 1 8 kilos of sausages at a price of $32. Price per kilo **$4**	**Deal 4** 10 kilos of sausages at a price of $55. Price per kilo **$5.50**	**Deal 7** 7 kilos of sausages at a price of $35. Price per kilo **$5**
Deal 2 5 kilos of sausages at a price of $15. Price per kilo **$3**	**Deal 5** 3 kilos of sausages at a price of $18. Price per kilo **$6**	**Deal 8** 12 kilos of sausages at a price of $30. Price per kilo **$2.50**
Deal 3 6 kilos of sausages at a price of $24 Price per kilo **$4**	**Deal 6** 10 kilos of sausages at a price of $35. Price per kilo **$3.50**	**Deal 9** 10 kilos of sausages at a price of $65. Price per kilo **$6.50**

(b) Top three deals are Deal 8, Deal 2 and Deal 6

Page 57 $100 a day – where can I go?

Teacher check

Page 58 The great Cheesy Puff investigation

1. Deal 1 = 27c
Deal 2 = 14c
Deal 3 = 30c
Deal 4 = 13c

2. Deal 4
Deal 2
Deal 1
Deal 3

Page 59 Round off and change too!

The totals	Rounded off to the nearest 5c	Change from $20	Change from $50
$8.82	$8.80	$11.20	$41.20
$11.97	$11.95	$8.05	$38.05
$18.03	$18.05	$1.95	$31.95
$9.09	$9.10	$10.90	$40.90
$14.44	$14.45	$5.55	$35.55
$17.11	$17.10	$2.90	$32.90
$4.66	$4.65	$15.35	$45.35
$19.11	$19.10	$0.90	$30.90
$13.54	$13.55	$6.45	$36.45
$16.08	$16.10	$3.90	$33.90
$4.87	$4.85	$15.15	$45.15
$10.19	$10.20	$9.80	$39.80

Page 60 Supermarket round up – Bring your cash!

Item bought	Cost	To nearest 5c	Change from $10	Change from $20	Change from $50
Biscuits	$4.99	$5	$5	$15	$45
Carrots	$0.88	$0.90	$9.10	$19.10	$49.10
Milk	$2.35	$2.35	$7.65	$17.65	$47.65
Crackers	$2.93	$2.95	$7.05	$17.05	$47.05
Pumpkin	$3.69	$3.70	$6.30	$16.30	$46.30
Fruit salad	$4.54	$4.55	$5.45	$15.45	$45.45
Toothpaste	$2.12	$2.10	$7.90	$17.90	$47.90
Jelly	$3.07	$3.05	$6.95	$16.95	$46.95
Ice-cream	$9.99	$10	$0	$10	$40
Broccoli	$1.59	$1.60	$8.40	$18.40	$48.40
Chops	$5.05	$5.05	$4.95	$14.95	$44.95
Chocolate	$3.26	$3.25	$6.75	$16.75	$46.75
Muesli	$2.99	$3	$7	$17	$47
Chips	$3.12	$3.10	$6.90	$16.90	$46.90
Sauce	$4.47	$4.45	$5.55	$15.55	$45.55

P&A 1

Page 61 The real value of medals

1.

	Gold medals	Silver medals	Bronze medals	Medal total	Gold medal points	Silver medal points	Bronze medal points	Total medal points
United States of America	46	29	29	104	138	58	29	225
China	38	27	23	88	114	54	23	191
Great Britain	29	17	19	65	87	34	19	140
Russia	24	26	32	82	72	52	32	156
South Korea	13	8	7	28	39	16	7	62
Germany	11	19	14	44	33	38	14	85
France	11	11	12	34	33	22	12	67
Italy	8	9	11	28	24	18	11	53
Hungary	8	4	5	17	24	8	5	37
Australia	7	16	12	35	21	32	12	65

2. 1. USA 2. China 3. Russia
4. Great Britain 5. Germany 6. France
7. Australia 8. South Korea
9. Italy 10. Hungary

Page 62 The 2020 Olympics – I see all!

1.

	Gold medals	Silver medals	Bronze medals	Total medal points
Tajikistan	15	10	12	**77**
Morocco	**14**	8	12	70
Kuwait	11	4	5	**46**
Saudi Arabia	11	5	1	**44**
Hong Kong, China	16	7	**5**	67
Bahrain	**9**	11	12	61
Afghanistan	14	10	**0**	62
Singapore	5	16	17	**64**
Qatar	16	4	**14**	70
Moldova	7	**6**	17	50
Greece	4	14	16	**56**
Portugal	12	**0**	9	45
Montenegro	10	10	10	**60**
Guatemala	**6**	8	12	46
Gabon	**6**	12	13	55

2. Teacher check

Page 63 Which rugby rules?

1.

Club	Try	Converted goal	Penalty goal	Drop goal	Total score
The Cygnets	3	2	3	1	**31**
The Bullants	4	3	1	4	**41**
The Vampires	6	5	—	5	**55**
The Shuttles	8	7	3	3	**72**
The Geese	9	7	2	1	**68**
The Lunar Landers	4	3	2	—	**32**
The Containers	3	3	4	3	**42**
The Wombats	7	3	2	5	**62**
The Bellbirds	6	5	3	5	**64**

2.

Club	Try	Converted goal	Penalty goal	Drop goal	Total score
The Cygnets	**4**	4	4	3	49
The Bullants	**2**	2	3	3	32
The Vampires	**2**	1	6	—	30
The Shuttles	**4**	2	3	4	45
The Geese	**3**	2	7	1	43
The Lunar Landers	**3**	—	4	1	30
The Containers	**6**	3	3	4	57
The Wombats	**3**	1	3	3	35
The Bellbirds	**3**	—	3	2	30

Page 64 Aussie rules scoreboard

1.

Club	Goals	Behinds	Total score
The Unicorns	11	10	**76**
The Helicopters	9	17	**71**
The Planets	12	21	**93**
The Beasts	10	6	**66**
The Fighters	16	14	**110**
The Screamers	18	18	**126**
The Machines	20	19	**139**
The Falcons	7	15	**57**
The Tornadoes	13	7	**85**
The Bellringers	19	3	**117**

2.

Club	Goals	Behinds	Total score
The Unicorns	4	**9**	33
The Helicopters	**5**	11	41
The Planets	5	**14**	44
The Beasts	3	**19**	37
The Fighters	**6**	7	43
The Screamers	**9**	4	58
The Machines	11	**7**	73
The Falcons	**2**	9	21
The Tornadoes	**7**	13	55
The Bellringers	**4**	8	32

Page 65 In a league of their own

1.

Club	Try	Conversion	Penalty goal	Field goal	Total score
The Sirens	3	2	3	1	**23**
The Battering Rams	6	3	1	6	**38**
The Vipers	6	4	3	—	**38**
The Seagulls	2	3	3	3	**23**
The Globals	9	7	2	1	**55**
The Lucky Legends	4	3	2	—	**26**
The Caribs	3	3	4	3	**29**
The Whirlwinds	7	3	2	5	**43**
The Bombshells	6	5	3	5	**45**

2.

Club	Try	Conversion	Penalty goal	Field goal	Total score
The Sirens	**7**	6	6	3	55
The Battering Rams	**9**	2	3	3	49
The Vipers	**5**	1	6	—	34
The Seagulls	**5**	2	3	6	36
The Globals	**6**	4	3	1	39
The Lucky Legends	**7**	—	6	1	41
The Caribs	**4**	3	3	6	34
The Whirlwinds	**8**	1	3	3	43
The Bombshells	**6**	—	3	2	32

Page 66 Not these two—but why?

1. (a) 22, 25 – pattern is +3, +2, so number must be 24

(b) 66, 65 – pattern is +5, +10, so number must be 68

(c) 156, 155 – pattern is +10, so number must be 151

(d) 77, 67 – pattern is +4, +3, so number must be 68

(e) 22, 24 – pattern is double the previous number, so number must be 32

(f) 63, 65 – pattern is –10, –9, so number must be 63

(g) 150, 160 – pattern is +4, so number must be 159

(h) 234, 238 – pattern is –10, –9, –8, –7, –6, –5, –4, so number must be 237

(i) 361, 251 – pattern is –10, so number must be 351

(j) 67, 77 – pattern is +7, +6, so number must be 88

P&A 2

Page 67 Paints for painting

1.

Polo Paints $30 for 12 colours 1 colour is **$2.50**	**Fluoro Flash Paints** $60 for 12 colours 1 colour is **$5.00**	**Waterless Colours** $39.60 for 12 colours 1 colour is **$3.30**	**Albright Paints** $52.80 for 12 colours 1 colour is **$4.40**
Spilt Paints $37.20 for 12 colours 1 colour is **$3.10**	**Wet Paints** $33.60 for 12 colours 1 colour is **$2.80**	**Magenta Moods** $74.40 for 12 colours 1 colour is **$6.20**	**Cyan Colours** $44.40 for 12 colours 1 colour is **$3.70**
Perfect Paints $46.80 for 12 colours 1 colour is **$3.90**	**Slowdry Paints** $73.20 for 12 colours 1 colour is **$6.10**	**Universal Colours** $45.60 for 12 colours 1 colour is **$3.80**	**Animal Colours** $35.40 for 12 colours 1 colour is **$2.95**
Wayout Paints $36 for 12 colours 1 colour is **$3.00**	**Dipping Paints** $50.40 for 12 colours 1 colour is **$4.20**	**Rainbow Colours** $42 for 12 colours 1 colour is **$3.50**	**Zebra Paints** $32.40 for 12 colours 1 colour is **$2.70**

2. Magenta Moods, Slowdry Paints, Fluoro Flash Paints Albright Paints

3. Polo Paints, Zebra Paints, Wet Paints, Animal Colours

Page 68 Your name in gold

1.

Athlete's name	Number of letters	Cost of … vowels	Cost of … consonants	Total cost of name
Ryan Napolean	12	$375	$385	$760
Ashleigh Brennan	15	$375	$550	$925
Casey Eastham	12	$375	$385	$760
Jamie Dwyer	10	$300	$330	$630
Anna Mears	9	$300	$275	$575
Emily Seebohm	12	$375	$385	$760
Lauren Jackson	13	$375	$440	$815
Joe Ingles	9	$300	$275	$575
Matthew Dellavedova	18	$525	$605	$1130

2. Teacher check

Page 69 *Whose stable is the most stable?*

1. (a) (b)

Trainer	Day 1	Day 2	Day 3	Total horses	Trainer ranking
Fred Shackles	52 horseshoes 13 horses	68 horseshoes 17 horses	48 horseshoes 12 horses	**42**	**= 2**
Frank Furlong	36 horseshoes 9 horses	24 horseshoes 6 horses	44 horseshoes 11 horses	**27**	**10**
Thomas Track	32 horseshoes 8 horses	36 horseshoes 9 horses	48 horseshoes 12 horses	**29**	**9**
Ian Equine	56 horseshoes 14 horses	12 horseshoes 3 horses	52 horseshoes 13 horses	**30**	**8**
Ted Horsefield	72 horseshoes 18 horses	28 horseshoes 7 horses	80 horseshoes 20 horses	**45**	**1**
Ron Stayer	56 horseshoes 14 horses	40 horseshoes 10 horses	72 horseshoes 18 horses	**42**	**= 2**
Peter Miles	40 horseshoes 10 horses	76 horseshoes 19 horses	20 horseshoes 5 horses	**34**	**7**
Jenny Stall	68 horseshoes 17 horses	16 horseshoes 4 horses	76 horseshoes 19 horses	**40**	**4**
Karen Course	60 horseshoes 15 horses	36 horseshoes 9 horses	44 horseshoes 11 horses	**35**	**6**
Miles Footlock	36 horseshoes 9 horses	4 horseshoes 1 horses	64 horseshoes 16 horses	**26**	**11**
Lionel Mare	8 horseshoes 2 horses	64 horseshoes 16 horses	80 horseshoes 20 horses	**38**	**5**

Page 70 *Cup day word problems*

1. (a) $12 \times 4 = 48$ legs
(b) $64 \div 4 = 16$ waiters
(c) $12 \times 5 = \$60$ tip
(d) $12 \times 3 = 36$ glasses
(e) $\$108 \div 12 = \$9$ per diner
(f) $12 \times 6 = 72$ meals
(g) $126 \div 2 = 63$ waiters
(h) $72 \times 9 = 648$ meals per tent
(i) $3 \times \$22.50 = \$67.50$ each
(j) $108 \div 9 = 12$ bottles
(k) $117 \div 9 = 13$ hot dogs
(l) $12 \times 6 = 72$ pieces of cutlery

Page 71 *It's about legs!*

1. (a) $(2 \times 2) + (4 \times 8) + (6 \times 8) = 84$ legs
(b) $(4 \times 2) + (2 \times 8) + (3 \times 8) + (5 \times 8) = 88$ legs
(c) $(2 \times 2) + (2 \times 4) + (5 \times 8) + (2 \times 8) = 68$ legs
(d) $(3 \times 2) + (6 \times 8) + (2 \times 8) = 70$ legs
(e) $(8 \times 2) + (3 \times 8) + (10 \times 8) = 120$ legs
(f) $(5 \times 2) + (4 \times 6) + (2 \times 8) + (12 \times 8) = 146$ legs
(g) $(10 \times 2) + (6 \times 6) + (2 \times 8) + (3 \times 8) = 96$ legs
(h) $(3 \times 2) + (4 \times 6) + (6 \times 8) = 78$ legs
(i) $(5 \times 2) + (2 \times 8) + (3 \times 8) + (5 \times 8) = 90$ legs
(j) $(2 \times 4) + (3 \times 2) + (6 \times 6) + (3 \times 8) = 74$ legs
(k) $(1 \times 2) + (9 \times 8) + (6 \times 6) = 110$ legs
(l) $(11 \times 2) + (8 \times 8) + (6 \times 6) + (3 \times 4) = 134$ legs

Page 72 *Now it's your turn*

Answers will vary – teacher check

$4 \times 24 = 96$	$15 \times 3 = 45$	$54 \div 9 = 6$
$16 \times 4 = 64$	$64 \div 8 = 8$	$88 \div 8 = 11$
$36 \div 6 = 6$	$7 \times 8 = 56$	$6 \times 20 = 120$
$36 \div 3 = 12$		

P&A 3

Page 72 *Balance the scales*

1. (a) $13 + \boxed{12} = 29 - 4$
(b) $79 - \boxed{11} = 23 + 45$
(c) $58 - \boxed{26} = 16 + 16$
(d) $66 + \boxed{6} = 100 - 28$
(e) $34 + \boxed{18} = 99 - 47$
(f) $\boxed{28} + 22 = 11 + 39$
(g) $66 + \boxed{20} = 27 + 59$
(h) $91 - \boxed{10} = 33 + 48$
(i) $110 - \boxed{20} = 57 + 33$
(j) $101 + \boxed{20} = 77 + 44$
(k) $55 - \boxed{16} = 4 + 35$
(l) $72 - \boxed{29} = 26 + 17$
(m) $81 - \boxed{17} = 45 + 19$
(n) $66 + \boxed{46} = 99 + 13$
(o) $89 + 7 = 55 + \boxed{41}$
(p) $41 + 33 = 101 - \boxed{27}$
(q) $13 + 29 = 67 - \boxed{25}$
(r) $51 - 18 = 7 + \boxed{26}$
(s) $71 + \boxed{7} = 66 + 12$
(t) $50 + \boxed{12} = 120 - 58$
(u) $26 + 33 = 48 + \boxed{11}$

2. Teacher check

Page 74 *I sense a number and it is …*

When a number is added to 32, the answer is the same as 65 minus 14. The number is **19**	When a number is subtracted from 88, the answer is the same as 29 plus 14. The number is **45**	When a number is added to 49, the answer is the same as 99 minus 12. The number is **38**
When a number is subtracted from 78, the answer is the same as 36 plus 8. The number is **34**	When a number is added to 83, the answer is the same as 122 minus 9. The number is **30**	When a number is subtracted from 64, the answer is the same as 17 plus 7. The number is **40**
When a number is added to 29, the answer is the same as 71 minus 15. The number is **27**	When a number is subtracted from 63, the answer is the same as 11 plus 22. The number is **30**	When a number is added to 57, the answer is the same as 120 minus 25. The number is **38**
When a number is subtracted from 97, the answer is the same as 41 plus 12. The number is **44**	When a number is added to 54, the answer is the same as 85 minus 11. The number is **20**	When a number is subtracted from 77, the answer is the same as 32 plus 8. The number is **37**
When a number is added to 21, the answer is the same as 52 minus 14. The number is **17**	When a number is subtracted from 62, the answer is the same as 33 plus 7. The number is **22**	When a number is added to 49, the answer is the same as 105 minus 24. The number is **32**

Page 75 *Balance scale word problems – who am I?*

1. (a) 31 (b) 7 (c) 25 (d) 16
(e) 15 (f) 17 (g) 21 (h) 34
(i) 19 (j) 28 (k) 34 (l) 37

Page 76 *I seek a draw – the perfect cricket scores*

1. (a) 265 (b) 328 (c) 319 (d) 144
(e) 324 (f) 181 (g) 346 (h) 264
(i) 358 (j) 274 (k) 234 (l) 299

Page 77 *Are all the pairs equal? I don't think so!*

= coloured green ≠ coloured red

16 + 39	**55**	≠	22 + 34	**56**
20 + 18	**38**	=	16 + 22	**38**
33 + 39	**72**	≠	22 + 48	**70**
25 + 36	**61**	≠	44 + 19	**63**
9 + 44	**53**	≠	12 + 44	**56**
39 + 45	**84**	=	22 + 62	**84**
37 + 29	**66**	≠	18 + 64	**82**
24 + 38	**62**	≠	32 + 56	**88**
21 + 41	**62**	≠	17 + 41	**58**
52 + 30	**82**	=	26 + 56	**82**
21 + 17	**38**	≠	9 + 34	**43**
34 + 18	**52**	=	25 + 27	**52**
16 + 41	**57**	≠	22 + 36	**58**
49 + 32	**81**	≠	43 + 29	**72**
28 + 69	**97**	≠	55 + 31	**86**

Page 78 *It's a balancing act*

1. (a) 11 (b) 55 (c) 18 (d) 18
(e) 37 (f) 41 (g) 30 (h) 50