

NEW WAVE

NUMBER AND ALGEBRA (YEAR 5)

STUDENT WORKBOOK ANSWERS

N&PV – 1

Page 2 Complete the factor asteroids

- Answers will vary. Teacher check
-

	6	7	8	9
The number 1467 is a multiple of	✗	✗	✗	✓
The number 9382 is a multiple of	✗	✗	✗	✗
The number 1005 is a multiple of	✗	✗	✗	✗
The number 3856 is a multiple of	✗	✗	✓	✗
The number 2296 is a multiple of	✗	✓	✓	✗
The number 9385 is a multiple of	✗	✗	✗	✗
The number 7705 is a multiple of	✗	✗	✗	✗
The number 1904 is a multiple of	✗	✓	✓	✗
The number 4408 is a multiple of	✗	✗	✓	✗
The number 3199 is a multiple of	✗	✓	✗	✗

Page 3 The laws of dividing – try 6

Divisible by 6 – 1032, 498, 564, 642, 834, 426

Page 4 The laws of dividing – this time try 7

Divisible by 7 – 476, 413, 644, 406

Page 5 The laws of dividing – try 8

Divisible by 8 – 1032, 1376, 834

Page 6 The laws of dividing – try it with 9

Divisible by 9 – none

Page 7 The mystery of multiples

Missing number is ...	Counting by multiples of ...
30	5
48	8
42	7
63	9
36	6
48	4
75	5
55	11
9	9
64	8
78	6
63	7
72	4
125	5
148	4
150	6
128	8
112	7
162	9

I am – 72, 56, 70, 56, 72, 42

Page 8 Handball target

Answers will vary. Teacher check

N&PV – 2

Page 9 Round 'em up and round 'em off

Number	Rounded off to the nearest ten	Number	Rounded off to the nearest ten
746	750	774	770
789	790	268	270
178	180	91	90
727	730	672	670
641	640	687	690
779	780	277	280
107	110	272	270
122	120	891	890
581	580	774	770
678	680	659	660
896	900	996	1000
1233	1230	6573	6570
6677	6680	7104	7100

Number	Rounded off to the nearest hundred	Number	Rounded off to the nearest hundred
567	600	7714	7700
6634	6600	2655	2700
7802	7800	9223	9200
5693	5700	6872	6900
5822	5800	4457	4500
5801	5800	1277	1300
4456	4500	2712	2700
2978	3000	8491	8500
1109	1100	7748	7700
1288	1300	6590	6600
3451	3500	8755	8800
4458	4500	6903	6900
1129	1100	4464	4500

Page 10 Pete the plumber rounds off

Jobs done	Actual cost	Rounded to nearest \$10	Rounded to nearest \$100
Jan #1	\$1234	\$1230	\$1200
Jan #2	\$1566	\$1570	\$1600
Jan #3	\$2238	\$2240	\$2200
Jan #4	\$1849	\$1850	\$1800
Jan #5	\$2902	\$2900	\$2900
Jan #6	\$1229	\$1230	\$1200
Jan #7	\$1185	\$1190	\$1200
Total	\$12 203	\$12 210	\$12 100

Jobs done	Actual cost	Rounded to nearest \$10	Rounded to nearest \$100
Feb #1	\$2295	\$2300	\$2300
Feb #2	\$2817	\$2820	\$2800
Feb #3	\$2093	\$2090	\$2100
Feb #4	\$2473	\$2470	\$2500
Feb #5	\$2109	\$2110	\$2100
Feb #6	\$2248	\$2250	\$2200
Feb #7	\$2871	\$2870	\$2900
Total	\$16 906	\$16 910	\$16 900
Mar #1	\$2119	\$2120	\$2100
Mar #2	\$2321	\$2320	\$2300
Mar #3	\$3067	\$3070	\$3100
Mar #4	\$3107	\$3110	\$3100
Mar #5	\$3902	\$3900	\$3900
Mar #6	\$3188	\$3190	\$3200
Mar #7	\$3029	\$3030	\$3000
Total	\$20 733	\$20 740	\$20 700

Answers will vary. Teacher check

Page 11 The business of rounding off

- (a) 40 (b) 860 (c) 50 (d) 390
(e) 30 (f) 380 (g) 590 (h) 80
(i) 490 (j) 450 (k) 320 (l) 740
(m) 330 (n) 930 (o) 560 (p) 840
- (a) 600 (b) 300 (c) 700 (d) 500
(e) 200 (f) 200 (g) 500 (h) 100
(i) 300 (j) 900 (k) 300 (l) 800
(m) 400 (n) 900 (o) 500 (p) 900
(q) 2900 (r) 4900 (s) 4700 (t) 5700
- (a) 70 (b) 30 (c) 90 (d) 110
(e) 60 (f) 340
- Teacher check

Page 12 A super docket

Buddy's Supa Market!		Rounded to nearest \$	Rounded to nearest 50c
Lamb BBQ chops	10.52	\$11	\$10.50
Whole milk	2.99	\$3	\$3
Pizza base 30 cm	3.79	\$4	\$4
Pizza base 30 cm	3.79	\$4	\$4
Pizza base 30 cm	3.79	\$4	\$4
Sandwich ham	6.08	\$6	\$6
Bananas	3.06	\$3	\$3
Green apples	6.35	\$6	\$6.50
Raisins	11.29	\$11	\$11.50
BBQ sausages	3.94	\$4	\$4
Tinned tuna	2.73	\$3	\$2.50
Tinned tuna	2.73	\$3	\$2.50
Tinned tuna	2.73	\$3	\$2.50
Tinned tuna	2.73	\$3	\$2.50
Olive oil spray	3.99	\$4	\$4
Iceberg lettuce	1.75	\$2	\$2
Lamingtons	3.67	\$4	\$3.50
Muesli	4.12	\$4	\$4

- \$80.05
 - \$82
 - \$80
- Teacher check

Page 13 The wide, big land for me

- (a)

State/Territory	Area – square km	Rounded off to the nearest million	Rounded off to the nearest hundred thousand	Rounded off to the nearest ten thousand
WA	2 526 786	3 000 000	2 500 000	2 530 000
QLD	1 723 936	2 000 000	1 700 000	1 720 000
NT	1 335 742	1 000 000	1 300 000	1 340 000
SA	978 810	1 000 000	1 000 000	980 000
NSW	800 628	1 000 000	800 000	800 000
VIC	227 010		200 000	230 000
TAS	64 519		100 000	60 000
ACT	2356			

(b) Teacher check

- Teacher check

State/Territory	% of Australia's area	Percentage rounded off to nearest 5%	State/Territory	% of Australia's area	Percentage rounded off to nearest 5%
WA	33	35%	NSW	10.04	10%
QLD	22.5	25%	VIC	3.0	5%
NT	17.5	20%	TAS	0.9	0%
SA	12.7	15%	ACT	0.1	0%

Page 14 My Australian holiday

- No, his 3 weeks will cost \$525. He can spend only \$20 per day.
- Yes, she is correct and she could spend \$26 a day on lunches.
- No, his 3 weeks of breakfast and lunch will cost him \$39 a day.
- Yes, she has exactly the right amount of money to do this.
- Yes, he is correct and could afford \$33 a day.
- Yes, she is correct and could afford \$30 a day.
- Yes, she is correct and could afford \$29 a day.

N&PV – 3

Page 15 Use the lattice method

	5	3	
1	1 0	0 6	2
5	4 ⁺¹ 5	2 7	9
	3	7	

	4	6	
1	1 2	1 8	3
7	2 ⁺² 8	4 2	7
	0	2	

	7	2	
2	2 1	0 6	3
3	2 1	0 6	3
	7	6	

	5	2	
2	2 0	0 8	4
2	1 ⁺¹ 5	0 6	3
	3	6	

	6	4	
2	1 ⁺¹ 8	1 2	3
2	3 0	2 0	5
	4	0	

	2	6	
1	1 2	3 6	6
7	1 ⁺¹ 8	5 4	9
	9	4	

	6	7	
3	3 0	3 5	5
7	3 ⁺¹ 6	4 2	6
	5	2	

	7	3	
3	2 ⁺¹ 8	1 2	4
5	5 ⁺¹ 6	2 4	8
	0	4	

If	Then	If	Then
$6 \times 3 = 18$	$60 \times 3 = 180$	$5 \times 6 = 30$	$50 \times 60 = 3000$
$4 \times 9 = 36$	$40 \times 9 = 360$	$7 \times 7 = 49$	$70 \times 70 = 4900$
$7 \times 5 = 35$	$70 \times 5 = 350$	$2 \times 6 = 12$	$20 \times 60 = 1200$
$6 \times 8 = 48$	$60 \times 8 = 480$	$9 \times 9 = 81$	$90 \times 90 = 8100$
$3 \times 7 = 21$	$30 \times 7 = 210$	$3 \times 6 = 18$	$30 \times 60 = 1800$
$9 \times 8 = 72$	$90 \times 8 = 720$	$4 \times 7 = 28$	$40 \times 70 = 2800$
$2 \times 6 = 12$	$20 \times 6 = 120$	$8 \times 6 = 48$	$80 \times 60 = 4800$
$5 \times 5 = 25$	$50 \times 5 = 250$	$5 \times 9 = 45$	$50 \times 90 = 4500$
$3 \times 4 = 12$	$30 \times 4 = 120$	$4 \times 6 = 24$	$40 \times 60 = 2400$
$5 \times 3 = 15$	$50 \times 3 = 150$	$6 \times 7 = 42$	$60 \times 70 = 4200$

- \$159. Teacher check
- \$95. Teacher check

	6	4	
2	2 4	1 6	4
6	0 ⁺ 6	0 4	1
	2	4	

	3	5	
1	1 2	2 0	4
6	2 4	4 0	8
	8	0	

	6	1	
2	2 4	0 4	4
6	2 4	0 4	4
	8	4	

	8	6	
2	2 4	1 8	3
7	1 ⁺ 6	1 2	2
	5	2	

	5	2	
2	2 0	0 8	4
3	3 0	1 2	6
	9	2	

	3	7	
2	2 4	5 6	8
9	0 3	0 7	1
	9	7	

	7	8	
5	4 ⁺ 2	4 8	6
2	4 ⁺ 9	5 6	7
	2	6	

	8	4	
3	2 ⁺ 4	1 2	3
1	5 ⁺ 6	2 8	7
	0	8	

Problem	Split out	Multiply out	Partial products
33×18	$(30 + 3) \times (10 + 8)$	$(30 \times 10) + (30 \times 8) + (3 \times 10) + (3 \times 8)$	$300 + 240 + 30 + 24 = 594$
27×19	$(20 + 7) \times (10 + 9)$	$(20 \times 10) + (20 \times 9) + (7 \times 10) + (7 \times 9)$	$200 + 180 + 70 + 63 = 513$
32×24	$(30 + 2) \times (20 + 4)$	$(30 \times 20) + (30 \times 4) + (2 \times 20) + (2 \times 4)$	$600 + 120 + 40 + 8 = 768$
45×23	$(40 + 5) \times (20 + 3)$	$(40 \times 20) + (40 \times 3) + (5 \times 20) + (5 \times 3)$	$800 + 120 + 100 + 15 = 1035$
62×34	$(60 + 2) \times (30 + 4)$	$(60 \times 30) + (60 \times 4) + (2 \times 30) + (2 \times 4)$	$1800 + 240 + 60 + 8 = 2108$
59×16	$(50 + 9) \times (10 + 6)$	$(50 \times 10) + (50 \times 6) + (9 \times 10) + (9 \times 6)$	$500 + 300 + 90 + 54 = 944$
37×25	$(30 + 7) \times (20 + 5)$	$(30 \times 20) + (30 \times 5) + (7 \times 20) + (7 \times 5)$	$600 + 150 + 140 + 35 = 925$
49×27	$(40 + 9) \times (20 + 7)$	$(40 \times 20) + (40 \times 7) + (9 \times 20) + (9 \times 7)$	$800 + 280 + 180 + 63 = 1323$

Problem	Split out	Multiply out	Partial products
38×23	$(30 + 8) \times (20 + 3)$	$(30 \times 20) + (30 \times 3) + (8 \times 20) + (8 \times 3)$	$600 + 90 + 160 + 24 = 874$
36×13	$(30 + 6) \times (10 + 3)$	$(30 \times 10) + (30 \times 3) + (6 \times 10) + (6 \times 3)$	$300 + 90 + 60 + 18 = 468$
44×25	$(40 + 4) \times (20 + 5)$	$(40 \times 20) + (40 \times 5) + (4 \times 20) + (4 \times 5)$	$800 + 200 + 80 + 20 = 1100$
52×39	$(50 + 2) \times (30 + 9)$	$(50 \times 30) + (50 \times 9) + (2 \times 30) + (2 \times 9)$	$1500 + 450 + 60 + 18 = 2028$
63×37	$(60 + 3) \times (30 + 7)$	$(60 \times 30) + (60 \times 7) + (3 \times 30) + (3 \times 7)$	$1800 + 420 + 90 + 21 = 2331$
57×24	$(50 + 7) \times (20 + 4)$	$(50 \times 20) + (50 \times 4) + (7 \times 20) + (7 \times 4)$	$1000 + 200 + 140 + 28 = 1368$
48×32	$(40 + 8) \times (30 + 2)$	$(40 \times 30) + (40 \times 2) + (8 \times 30) + (8 \times 2)$	$1200 + 80 + 240 + 16 = 1536$
56×28	$(50 + 6) \times (20 + 8)$	$(50 \times 20) + (50 \times 8) + (6 \times 20) + (6 \times 8)$	$1000 + 400 + 120 + 48 = 1568$

N&PV – 4

- | | | |
|----------------------------|---------------------------|-------------------------|
| 1. $11 \times 4 = 44, 112$ | $5 \times 9 = 45, 91$ | $6 \times 1 = 6, 121$ |
| $8 \times 3 = 24, 86$ | $7 \times 4 = 28, 73$ | |
| 2. $4 \times 6 = 24, 64r1$ | $5 \times 7 = 35, 73r4$ | $6 \times 3 = 18, 33$ |
| $3 \times 8 = 24, 85r2$ | $4 \times 3 = 12, 32r2$ | |
| 3. $4 \times 3 = 12, 36$ | $5 \times 7 = 35, 73r4$ | $6 \times 7 = 42, 72r5$ |
| $3 \times 7 = 21, 76r1$ | $4 \times 8 = 32, 87r2$ | |
| 4. $4 \times 9 = 36, 92r3$ | $5 \times 3 = 15, 33r1$ | $5 \times 6 = 30, 51r4$ |
| $3 \times 7 = 21, 73$ | $4 \times 10 = 40, 101r3$ | |

- | | |
|---------------------------|-----------------------------|
| 1. 6 teams, 3 sitting out | 6. 4 teams, 1 sitting out |
| 2. 5 teams, 4 sitting out | 7. 5 teams, 0 sitting out |
| 3. 8 teams, 6 sitting out | 8. 8 teams, 0 sitting out |
| 4. 7 teams, 2 sitting out | 9. 3 teams, 4 sitting out |
| 5. 8 teams, 5 sitting out | 10. 10 teams, 4 sitting out |
| | 11. 11 teams, 2 sitting out |

- | | | |
|----------------------------|-------------------------|-------------------------|
| 1. $4 \times 1 = 4, 195$ | $5 \times 1 = 5, 187r3$ | $6 \times 3 = 18, 38r1$ |
| $3 \times 1 = 3, 149r2$ | $4 \times 2 = 8, 29$ | |
| 2. $4 \times 2 = 8, 202r2$ | $5 \times 3 = 15, 39r4$ | $6 \times 5 = 30, 57r5$ |
| $3 \times 2 = 6, 287r1$ | $4 \times 5 = 20, 56$ | |
| 3. $4 \times 8 = 32, 85r2$ | $5 \times 1 = 5, 103r1$ | $6 \times 1 = 6, 118r1$ |
| $3 \times 1 = 3, 110r2$ | $4 \times 7 = 28, 73r1$ | |
| 4. $4 \times 4 = 16, 43$ | $5 \times 1 = 5, 110r2$ | $6 \times 1 = 6, 101r3$ |
| $3 \times 1 = 3, 194r1$ | $4 \times 1 = 4, 105r1$ | |
| 5. $4 \times 1 = 4, 167$ | $5 \times 1 = 5, 169r2$ | $6 \times 3 = 18, 38r1$ |
| $3 \times 2 = 6, 294r2$ | $4 \times 2 = 8, 209r1$ | |

Date	Number of golfers	Number of groups (4)	Leftovers
Jan 1	97	$97 \div 4 = 24$ groups	1 player
Jan 2	65	16	1
Jan 3	81	20	1
Jan 4	89	22	1
Jan 5	109	27	1
Jan 6	123	30	3
Jan 7	82	20	2
Jan 8	99	24	3
Jan 9	102	25	2
Jan 10	114	28	2
Jan 11	106	26	2
Jan 12	133	33	1

Jan 13	91	22	3
Jan 14	87	21	3
Jan 15	105	26	1
Jan 16	108	27	0
Jan 17	116	29	0
Jan 18	93	23	1
Jan 19	111	27	3
Jan 20	139	34	3
Jan 21	145	36	1
Jan 22	77	19	1
Jan 23	122	30	2
Jan 24	94	23	2
Jan 25	118	29	2
Jan 26	89	22	1

Page 24 *Setting up a new school*

- 37 chairs – 0 left over
- 18 tables – 0 left over
- 9 computers – 2 left over
- 32 lockers – 1 left over
- 22 calculators – 2 left over
- 48 pens – 2 left over
- 44 cushions – 1 left over
- 69 scrap books – 2 left over
- 189 sheets of cover paper – 0 left over

Page 25 *You ate how much pizza?*

- Zac – 2 pizzas, 1 piece left over
 Yuri – 2 pizzas, 6 pieces left over
 Xavier – 1 pizza, 5 pieces left over
 Udom – 4 pizzas, 2 pieces left over
 Vivian – 5 pizzas, 5 pieces left over
 Tina – 4 pizzas, 4 pieces left over
 Ronnie – 4 pizzas, 0 pieces left over
 Quentin – 3 pizzas, 6 pieces left over
 Sean – 5 pizzas, 3 pieces left over
 Peta – 4 pizzas, 6 pieces left over

N&PV – 5

Page 26 *Multiplication using tables*

Teacher check

Page 27 *Division using factors*

- | | | |
|-----------------|-------------------|----------------|
| 256 ÷ 8 = 32 | 1344 ÷ 6 = 224 | 765 ÷ 12 = 63 |
| 739 ÷ 15 = 49r4 | 1062 ÷ 18 = 59 | |
| 532 ÷ 14 = 38 | 1360 ÷ 16 = 85 | 936 ÷ 24 = 39 |
| 792 ÷ 12 = 66 | 928 ÷ 16 = 58 | |
| 896 ÷ 8 = 112 | 122 ÷ 16 = 7r10 | 444 ÷ 12 = 37 |
| 1065 ÷ 15 = 71 | 702 ÷ 18 = 39 | |
| 1416 ÷ 24 = 59 | 924 ÷ 28 = 33 | 608 ÷ 32 = 19 |
| 1836 ÷ 36 = 51 | 1648 ÷ 24 = 68r16 | |
| 1392 ÷ 48 = 29 | 644 ÷ 28 = 23 | 1584 ÷ 24 = 66 |
| 1044 ÷ 36 = 29 | 960 ÷ 24 = 40 | |

Page 28 *Multiplication using factors*

- | | | | |
|-----------------|-----------------|----------------|-----------------|
| 57 x 15 = 855 | 49 x 12 = 588 | 73 x 24 = 1752 | 38 x 14 = 532 |
| 51 x 18 = 918 | 113 x 12 = 1356 | 67 x 24 = 1608 | 121 x 18 = 2178 |
| 127 x 32 = 4064 | 97 x 12 = 1164 | 83 x 24 = 1992 | 123 x 21 = 2583 |
- Teacher check

Page 29 *Some really good guesses*

- 58
 - 83
 - 56
 - 94
 - 98
- Teacher check

Page 30 *The relationship between 25 and 100*

- | | | |
|-------------------|-------------------|-------------------|
| 6525 ÷ 25 = 261 | 8375 ÷ 25 = 335 | 3725 ÷ 25 = 149 |
| 9175 ÷ 25 = 367 | 2325 ÷ 25 = 93 | 5025 ÷ 25 = 201 |
| 219 x 25 = 5475 | 526 x 25 = 13 150 | 377 x 25 = 9425 |
| 619 x 25 = 15 475 | 785 x 25 = 19 625 | 971 x 25 = 24 275 |

Page 31 *Use the algorithm to solve!*

- | | |
|----------------|----------------|
| 884 x 9 = 7956 | 357 x 8 = 2856 |
| 639 x 7 = 4473 | 577 x 6 = 3462 |
| 483 x 4 = 1932 | 298 x 9 = 2682 |

Page 32 *A large number by a 2-digit number*

- | | |
|-------------------|-------------------|
| 378 x 46 = 17 388 | 619 x 27 = 16 713 |
| 634 x 75 = 47 550 | 291 x 69 = 20 079 |
| 824 x 47 = 38 728 | 337 x 52 = 17 524 |

F&D – 1

Page 33 *A fraction of a long jump*

- Teacher check
- Abbey 1.8 m Bianca 0.8 m Charli 3.6 m Donna 1.6 m
 Eddie 0.6 m Frankie 4 m Gina 1.2 m Harry 3.6 m
 Indy 3 m Jessie 1.6 m Ky 3.2 m Liam 4.2 m

Page 34 *Which is bigger?*

- $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{6}$, $\frac{1}{4}$
 $\frac{2}{8}$, $\frac{2}{5}$, $\frac{2}{4}$, $\frac{2}{9}$
 $\frac{3}{7}$, $\frac{3}{4}$, $\frac{3}{6}$, $\frac{3}{11}$
 $\frac{4}{6}$, $\frac{4}{8}$, $\frac{4}{5}$, $\frac{4}{15}$
 $\frac{5}{6}$, $\frac{5}{7}$, $\frac{5}{11}$, $\frac{5}{20}$
- 8. Teacher check

Page 35 *Colour in these fractions*

- (a) Teacher check (b) $\frac{3}{24}$ or $\frac{1}{8}$
- (a) Teacher check (b) $\frac{2}{24}$ or $\frac{1}{12}$
- (a) Teacher check (b) pink (c) $\frac{5}{24}$
- (a) Teacher check (b) brown by 9 squares (c) $\frac{9}{24}$
- (a) Teacher check (b) blue by 6 squares (c) $\frac{6}{24}$ or $\frac{1}{4}$

Page 36 *My favourite fraction flavours*

- No pineapple or raspberry
- $\frac{12}{36}$ or $\frac{1}{3}$
- $\frac{1}{6}$ either pineapple or orange
- $\frac{12}{36}$ or $\frac{1}{3}$ = 12 cans
- 9 cans = $\frac{9}{24}$ or $\frac{3}{8}$

Page 37 *I'm marking the spot*

Teacher check

Page 38 *Colour the shapes*

Teacher check

Page 39 *The adding of fractions*

-

add	$1\frac{1}{2}$	$2\frac{3}{4}$	4	$\frac{3}{4}$	$3\frac{3}{4}$	$9\frac{3}{4}$
$\frac{2}{4}$	2	$3\frac{1}{4}$	$4\frac{1}{2}$	$1\frac{1}{4}$	$4\frac{1}{4}$	$10\frac{1}{4}$
$\frac{3}{4}$	$2\frac{1}{4}$	$3\frac{1}{2}$	$4\frac{3}{4}$	$1\frac{1}{2}$	$4\frac{1}{2}$	$10\frac{1}{2}$
$\frac{1}{4}$	$1\frac{3}{4}$	3	$4\frac{1}{4}$	1	4	10

2.

add	$1\frac{1}{2}$	$2\frac{3}{4}$	4	$\frac{3}{4}$	$3\frac{3}{4}$	$9\frac{3}{4}$
	$1\frac{1}{4}$	$2\frac{3}{4}$	4	$5\frac{1}{4}$	2	5
	$2\frac{3}{4}$	4	$5\frac{1}{4}$	$6\frac{1}{2}$	$3\frac{3}{4}$	$6\frac{1}{4}$
	$3\frac{3}{4}$	$5\frac{1}{4}$	$6\frac{1}{2}$	$7\frac{3}{4}$	$4\frac{1}{2}$	$7\frac{1}{2}$
						$13\frac{1}{2}$

3.

add	$2\frac{5}{12}$	$\frac{1}{12}$	3	$\frac{7}{12}$	$\frac{9}{12}$	$4\frac{2}{12}$
	$\frac{5}{6}$	$3\frac{3}{12}$	$1\frac{1}{12}$	$3\frac{3}{6}$	$1\frac{5}{12}$	$1\frac{7}{12}$
	$\frac{7}{12}$	3	$\frac{8}{12}$	$3\frac{7}{12}$	$1\frac{3}{12}$	$1\frac{4}{12}$
	$\frac{3}{12}$	$2\frac{9}{12}$	$\frac{4}{12}$	$3\frac{3}{12}$	$1\frac{9}{12}$	1
						$4\frac{7}{12}$

4.

add	$2\frac{5}{12}$	$1\frac{1}{2}$	3	$\frac{7}{12}$	$3\frac{9}{12}$	$4\frac{2}{12}$
	$1\frac{10}{12}$	$3\frac{3}{12}$	$2\frac{4}{12}$	$3\frac{10}{12}$	$1\frac{5}{12}$	$4\frac{7}{12}$
	$1\frac{1}{12}$	$3\frac{3}{12}$	$2\frac{7}{12}$	$4\frac{1}{2}$	$1\frac{8}{12}$	$4\frac{10}{12}$
	$2\frac{7}{12}$	5	$4\frac{1}{12}$	$5\frac{5}{12}$	$3\frac{3}{12}$	$6\frac{6}{12}$

Page 40 Mixed and improper fractions

- $2\frac{1}{3}$
- $1\frac{1}{6}$
- $1\frac{3}{5}$
- $1\frac{1}{7}$
- $2\frac{4}{6}$
- $2\frac{1}{4}$
- $3\frac{1}{5}$
- $2\frac{3}{5}$
- $2\frac{4}{7}$
- $5\frac{1}{3}$
- $1\frac{3}{4}$
- $3\frac{2}{5}$
- $5\frac{3}{3}$
- $3\frac{1}{2}$
- $4\frac{1}{4}$
- $6\frac{1}{2}$

Page 41 Improper and mixed fractions

- $\frac{8}{3}$
- $\frac{19}{6}$
- $2\frac{4}{5}$
- $1\frac{2}{7}$
- $\frac{16}{6}$
- $1\frac{3}{4}$
- $1\frac{4}{3}$
- $1\frac{1}{5}$
- $2\frac{7}{7}$
- $5\frac{1}{3}$
- $1\frac{3}{4}$
- $2\frac{8}{5}$
- $2\frac{3}{3}$
- $1\frac{3}{7}$
- $2\frac{1}{4}$
- $1\frac{2}{2}$

Page 42 Find that fraction

1.–2. Teacher check

Page 43 Adding and subtracting in colour

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

(b) $\frac{7}{12}$

(c) $\frac{6}{12}$

(d) $\frac{5}{12}$

(e) $\frac{7}{12}$

(f) $\frac{5}{10}$

(g) $\frac{2}{10}$

(h) $2\frac{2}{5}$

Page 44 Wombat weigh-in

Order – heavy to light	Wombat name	Wombat weight – kg
1	Wang	2.984
2	Wayne	2.663
3	Wade	2.629
4	Walter	2.628
5	Warren	2.608
6	Wally	2.419
7	Wallis	2.407
8	Wendy	2.319
Equal 9	Wynne	2.138
Equal 9	Wozza	2.138
10	Willy	2.114
11	Wanda	2.109
12	Wynette	2.027
13	Walt	2.012

Page 45 School swimming records

- Lane 1 – 8th

Lane 2 – 5th

Lane 3 – 6th

Lane 4 – 3rd

(a) 2.01 sec

(b) 0.05 sec

(c) 0.03 sec
- Lane 5 – 1st

Lane 6 – 7th

Lane 7 – 2nd

Lane 8 – 4th
- Lane 1 – 8th

Lane 2 – 4th

Lane 3 – 7th

Lane 4 – 5th

(a) 2.33 sec

(b) 0.04 sec

(c) 1 second

Page 46 District cross-country

Position	Runner's name	School	Time minutes and seconds
1	Annie	Southern PS	41.11
2	Zac	Eastern PS	41.27
3	Donna	Eastern PS	41.52
4	Emma	Western PS	41.59
5	Sienna	Western PS	42.23
6	Bridget	Southern PS	42.34
7	Angus	Western PS	42.41
8	Peumike	Eastern PS	42.59
9	Aaron	Western PS	43.13
10	Jacqui	Eastern PS	43.28
11	Dylan	Western PS	43.47
12	Jeff	Western PS	43.56
13	Ronny	Southern PS	44.03
14	Amber	Western PS	44.11
15	Suzie	Western PS	44.39
16	Carl	Eastern PS	44.51
17	Caleb	Western PS	45.12
18	Benjamin	Southern PS	45.28
19	Ryan	Eastern PS	45.47
20	Emily	Eastern PS	46.09

Page 47 Roll me a decimal

Teacher check

Page 48 Look alike but not

- 0.024, 0.042, 0.044, 0.22, 0.23, 0.44
 - 0.0038, 0.3, 0.33, 0.35, 0.38, 3.8
 - 0.007, 0.066, 0.067, 0.607, 0.67, 0.7
 - 0.05, 0.059, 0.095, 0.59, 0.9, 0.95
 - 0.049, 0.094, 0.4, 0.49, 0.9, 0.94
- 1.3, 0.13, 0.03, 0.013, 0.01, 0.003
 - 0.5, 0.45, 0.05, 0.045, 0.04, 0.005
 - 0.76, 0.7, 0.67, 0.067, 0.06, 0.0067
 - 0.9, 0.59, 0.095, 0.059, 0.05, 0.009

Page 49 FM radio stations

Rank	Station	Frequency
1	2RRR	88.5
2	SBS Radio	92.5
3	2FBI	94.5
4	Smooth	95.3
5	The Edge	96.1
6	Nova	96.9
7	Triple H	100.1
8	BFM	100.9
9	WOW FM	101.7
10	WSFM	101.9
11	Hope	103.2
12	2DAY	104.1
13	Triple M	104.9
14	Triple J	105.7
15	Mix	106.5
16	2SER	107.3

Radio dial – teacher check

Page 50 Decimal apples

- 1.0, 1.01, 1.11, 10.00, 10.01, 10.1, 10.11, 11.0, 11.01, 11.11, 11.12, 12.0, 12.01, 12.1, 12.11, 12.12, 20.0, 20.01, 20.1, 20.11, 20.12, 21.0, 21.01, 21.1, 21.11, 21.12, 22.0, 22.01, 22.1, 22.11,
- Largest – 22.11, 22.1, 22.01
- Smallest – 1.0, 1.01, 1.11

Page 51 Decimals and fractions

- $\frac{25}{100}$
 - $\frac{9}{100}$
 - $\frac{6}{10}$
 - $\frac{7}{1000}$
 - $\frac{443}{1000}$
 - $\frac{1}{100}$
 - $\frac{22}{1000}$
 - $\frac{17}{100}$
 - $\frac{774}{1000}$
 - $\frac{559}{1000}$
 - $\frac{88}{100}$
 - $\frac{76}{100}$
 - $\frac{34}{100}$
 - $\frac{53}{100}$
 - $\frac{376}{1000}$
 - $\frac{16}{100}$
 - $\frac{8}{10}$
 - $\frac{984}{1000}$
- (c), (e), (b), (d), (e), (b), (a)
- 0.7
 - 0.11
 - 0.49
 - 0.008
 - 0.54
 - 0.1
 - 0.22
 - 0.019
 - 0.37
 - 0.231
 - 0.597
 - 0.039
 - 0.3
 - 0.817
 - 0.097
 - 0.185
 - 0.9
 - 0.345

Page 52 Long jump world records

1.

Athlete	Distance	Year	Increase (m)
Ralph Boston	8.21 m	1960	
Ralph Boston	8.24 m	1961	3 cm
Ralph Boston	8.28 m	1961	4 cm
Igor Ter-Ovanesyan	8.31 m	1962	3 cm
Ralph Boston	8.31 m	1964	Equalled
Ralph Boston	8.34 m	1964	3 cm
Ralph Boston	8.35 m	1965	1 cm
Igor Ter-Ovanesyan	8.35 m	1967	Equalled
Bob Beaman	8.90 m	1968	55 cm
Mike Powell	8.95 m	1991	5 cm

- 0.74 m
- 74 cm
- Teacher check

Page 53 Which is the wetter city?

Rain gauge – teacher check

- Sydney – June
- Sydney – March
- Sydney – April
- Sydney – May
- Sydney – February
- Sydney – January
- Melbourne – January or July
- Melbourne – July or January
- Melbourne – February
- Melbourne – June
- Melbourne – August
- Melbourne – March

Page 54 Here comes the sun!

- Adelaide 92 hours, Brisbane 89.4 hours, Melbourne 71.9 hours

Melbourne		Brisbane		Adelaide	
June	3.6	Mar.	6.5	June	4.7
July	3.7	Feb.	6.6	July	5
May	3.9	June	6.8	May	5.6
Aug.	4.7	May	6.9	Aug.	6.1
Apr.	5.6	Apr.	7.2	Sept.	7.1
Sept.	5.7	Jan.	7.4	Apr.	7.3
Oct.	6.3	July	7.4	Oct.	8.4
Mar.	6.8	Aug.	7.9	Mar.	8.7
Nov.	7	Oct.	8	Nov.	9.3
Dec.	7.5	Dec.	8.1	Dec.	9.3
Feb.	8.1	Sept.	8.2	Feb.	10
Jan.	9	Nov.	8.4	Jan.	10.5
Total	71.9	Total	89.4	Total	92

- Most sunshine: Adelaide Jan. 10.5, Adelaide Feb. 10, Adelaide Nov. 9.3, Adelaide Dec. 9.3, Melbourne Jan. 9
Least sunshine: Melbourne June 3.6, Melbourne July 3.7, Melbourne May 3.9, Melbourne Aug. 4.7, Adelaide June 4.7
- Adelaide for summer, autumn and spring. Brisbane for winter.

Page 55 Decimals and decimal fractions

- 0.7
- 0.31
- 0.008
- 0.121
- 0.13
- 0.9
- 0.101
- 0.88
- 0.016
- 0.199
- 0.234
- 0.44
- 0.08
- 0.059
- 0.1
- 0.18

M&FM – 1

Page 56 Showbags galore

- 2 x Candy bag, 0 x Giant chip, 2 x Big chocolate, 1 x Dentist bag
- 1 x Candy bag, 1 x Giant chip, 1 x Big chocolate, 1 x Dentist bag
- 2 x Candy bag, 4 x Giant chip, 2 x Big chocolate, 0 x Dentist bag
- 0 x Candy bag, 0 x Giant chip, 3 x Big chocolate, 3 x Dentist bag
- 2 x Candy bag, 2 x Giant chip, 2 x Big chocolate, 2 x Dentist bag
- 0 x Candy bag, 2 x Giant chip, 2 x Big chocolate, 2 x Dentist bag
- 1 x Candy bag, 1 x Giant chip, 1 x Big chocolate, 2 x Dentist bag
- 3 x Candy bag, 3 x Giant chip, 3 x Big chocolate, 1 x Dentist bag

Page 57 The cost of guttering

	Leaf busting spray	Total	Cost to customer
Up the spout!	\$25	\$165	\$181.50
That's a Clean Roof	\$37	\$204	\$224.40
Ryan Roof Clearing	\$41	\$169	\$185.90
Garvey's Gutters	\$27	\$200	\$220
Gutters R Us	\$36	\$178	\$195.80
Guts n Gutters	\$28	\$209	\$229.90

Page 58 Call the poolman – but which one?

1.	Subtotal	+ GST	Total
Stand Up Pool Cleaning	\$113	\$11.30	\$124.30
Just Swimming	\$147	\$14.70	\$161.70
Summer Daze Cleaning	\$107	\$10.70	\$117.70
Krystal Klear	\$128	\$12.80	\$140.80
Too Blue to Be True	\$98	\$9.80	\$107.80
No Fuss Poolworks	\$110	\$11	\$121

- Too Blue to Be True
Summer Daze Cleaning
No Fuss Poolworks
Stand Up Pool Cleaning
Krystal Klear
Just Swimming

Page 59 GST and the sun!

Cost	+ GST	Total cost	Change
\$9.80	\$0.98	\$10.78	\$9.20
\$12.30	\$1.23	\$13.53	\$6.45
\$11.60	\$1.16	\$12.76	\$7.25
\$10.40	\$1.04	\$11.44	\$8.55
\$19.50	\$1.95	\$21.45	\$28.55
\$17.90	\$1.79	\$19.69	\$30.30
\$18.20	\$1.82	\$20.02	\$30
\$19.10	\$1.91	\$21.01	\$29
\$11.95	\$1.20	\$13.15	\$6.85
\$7.70	\$0.77	\$8.47	\$11.55
\$12.10	\$1.21	\$13.31	\$6.70
\$11.45	\$1.15	\$12.60	\$7.40

Page 60 Adding GST

Order number	GST included	Total payable
000915	\$2.36	\$25.96
000916	\$1.43	\$15.76
000917	\$2.61	\$28.71
000918	\$7.74	\$85.14
000919	\$5.31	\$58.39
000900	\$2.30	\$25.25
000901	\$2.78	\$30.53
000902	\$2.19	\$24.04
000903	\$1.96	\$21.56
000904	\$2.22	\$24.37
000905	\$2.67	\$29.32
000906	\$2.83	\$31.08

Page 61 Coffee anyone?

Product price	Rounded up/down	GST (10% of rounded price)	GST equation Product price + GST	You pay (inc GST)
\$3.18	\$3.20	\$0.32	\$3.18 + \$0.32	\$3.50
\$2.93	\$2.90	\$0.29	\$2.93 + \$0.29	\$3.22/\$3.20
\$3.77	\$3.80	\$0.38	\$3.77 + \$0.38	\$4.15
\$2.66	\$2.70	\$0.27	\$2.66 + \$0.27	\$2.93/\$2.95
\$4.04	\$4	\$0.40	\$4.04 + \$0.40	\$4.44/\$4.45
\$3.61	\$3.60	\$0.36	\$3.61 + \$0.36	\$3.97/\$3.95
\$4.00	\$4	\$0.40	\$4.00 + \$0.40	\$4.40
\$3.83	\$3.80	\$0.38	\$3.83 + \$0.38	\$4.21/\$4.20
\$4.91	\$4.90	\$0.49	\$4.91 + \$0.49	\$5.40
\$2.45	\$2.40/\$2.50	\$0.24/\$0.25	\$2.45 + \$0.24 \$2.45 + \$0.25	\$2.68/\$2.69/ \$2.70
\$6.11	\$6.10	\$0.61	\$6.11 + \$0.61	\$6.72/\$6.70
\$7.14	\$7.10	\$0.71	\$7.14 + \$0.71	\$7.85
\$6.86	\$6.90	\$0.69	\$6.86 + \$0.69	\$7.55
\$5.66	\$5.70	\$0.57	\$5.66 + \$0.57	\$6.23/\$6.25
\$7.03	\$7	\$0.70	\$7.03 + \$0.70	\$7.73/\$7.75
\$6.99	\$7	\$0.70	\$6.99 + \$0.70	\$7.69/\$7.70
\$8.11	\$8.10	\$0.81	\$8.11 + \$0.81	\$8.92/\$8.90
\$7.33	\$7.30	\$0.73	\$7.33 + \$0.73	\$8.06/\$8.05
\$8.21	\$8.20	\$0.82	\$8.21 + \$0.82	\$9.03/\$9.05
\$5.78	\$5.80	\$0.58	\$5.78 + \$0.58	\$6.36/\$6.40

Page 62 On the weekend

- 3 colas, 6 pies, 2 waters
- 6 colas, 4 pies, 1 water
- 4 colas, 4 pies, 3 waters
- 3 colas, 3 pies, 5 waters
- 4 colas, 4 pies, 4 waters
- 0 colas, 6 pies, 6 waters
- 4 colas, 5 pies, 3 waters
- 3 colas, 3 pies, 6 waters
- 6 colas, 3 pies, 3 waters
- 6 colas, 6 pies, 0 waters

Page 63 Pocket money nightmare

- 17 weeks
- 17 weeks
- 19 weeks
- 15 weeks
- 11 weeks
- 14 weeks
- 13 weeks
- 17 weeks

P&A – 1

Page 64 Follow the pattern

Rule	Start at	Next 10 numbers
+6	3	9, 15, 21, 27, 33, 39, 45, 51, 57, 63
-3	101	98, 95, 92, 89, 86, 83, 80, 77, 74, 71
+5, -1	16	21, 20, 25, 24, 29, 28, 33, 32, 37, 36
+4	23	27, 31, 35, 39, 43, 47, 51, 55, 59, 63
-6	144	138, 132, 126, 120, 114, 108, 102, 96, 90, 84
-3, +7	12	9, 16, 13, 20, 17, 24, 21, 28, 25, 32
+12	6	18, 30, 42, 54, 66, 78, 90, 102, 114, 126
-9, +2	114	105, 107, 98, 100, 91, 93, 84, 86, 77, 79
+8	11	19, 27, 35, 43, 51, 59, 67, 75, 83, 91
+10, -2	210	220, 218, 228, 226, 236, 234, 244, 242, 252, 250
+3, -5	125	128, 123, 126, 121, 124, 119, 122, 117, 120, 115
-6, +3	117	111, 114, 108, 111, 105, 108, 102, 105, 99, 102
+12, -6	28	40, 34, 46, 40, 52, 46, 58, 52, 64, 58
+9, -7	34	43, 36, 45, 38, 47, 40, 49, 42, 51, 44
-4, +8	12	8, 16, 12, 20, 16, 24, 20, 28, 24, 32

Pattern	Description of rule/pattern
11, 12, 15, 20, 27, 36	+1, +3, +5, +7, +9
39, 44, 43, 48, 47, 52, 51	+5, -1
17, 24, 29, 36, 41, 48	+7, +5
65, 55, 60, 50, 55, 45, 50	-10, +5
66, 68, 64, 66, 62, 64, 60	+2, -4
88, 85, 91, 88, 94, 91, 97	-3, +6
112, 121, 130, 139, 148	+9
22, 30, 26, 34, 30, 38, 34	+8, -4
33, 40, 34, 41, 35	+7, -6
67, 76, 85, 84, 93, 102, 101	+9, +9, -1
14, 21, 18, 25, 22, 29	+7, -3
133, 144, 154, 165, 175	+11, +10
39, 44, 55, 60, 71, 76, 87	+5, +11

Page 65 Identify and continue

1.

1.2	2.4	3.6	4.8	6	7.2	8.4
Pattern is +1.2						
13.8	15	16.2	17.4	18.6	19.8	21
46.2	47.4	48.6	49.8	51	52.2	53.4
61.3	62.5	63.7	64.9	66.1	67.3	68.5

2.

1.2	2.1	3.0	3.9	4.8	5.7	6.6
Pattern is +0.9						
13.8	14.7	15.6	16.5	17.4	18.3	19.2
46.2	47.1	48	48.9	49.8	50.7	51.6
61.3	62.2	63.1	64	64.9	65.8	66.7

3.

1.2	2.7	4.2	5.7	7.2	8.7	10.2
Pattern is +1.5						
13.8	15.3	16.8	18.3	19.8	21.3	22.8
46.2	47.7	49.2	50.7	52.2	53.7	55.2
61.3	62.8	64.3	65.8	67.3	68.8	70.3

4.

1.2	3.5	5.8	8.1	10.4	12.7	15
Pattern is +2.3						
13.8	16.1	18.4	20.7	23	25.3	27.6
46.2	48.5	50.8	53.1	55.4	57.7	60
61.3	63.6	65.9	68.2	70.5	72.8	75.1

5.

1.2	4.6	8	11.4	14.8	18.2	21.6
Pattern is +3.4						
13.8	17.2	20.6	24	27.4	30.8	34.2
46.2	49.6	53	56.4	59.8	63.2	66.6
61.3	64.7	68.1	71.5	74.9	78.3	81.7

Page 66 Number sequences to solve

1.

	Pattern	The next 8 in the sequence							
17	+6, -2	23	21	27	25	31	29	35	33
	+9, -3	26	23	32	29	38	35	44	41
	-12, +14	5	19	7	21	9	23	11	25
	+5, +7	22	29	34	41	46	53	58	65
	-3, +5	14	19	16	21	18	23	20	25

2.

	Pattern	The next 8 in the sequence							
6.5	+1.5, -0.5	8	7.5	9	8.5	10	9.5	11	10.5
	+1.5, +3	8	11	12.5	15.5	17	20	21.5	24.5
	+0.75, -0.25	7.25	7	7.75	7.5	8.25	8	8.75	8.5
	+1.1, +2.2	7.6	9.8	10.9	13.1	14.2	16.4	17.5	19.7
	+3.5, -2	10	8	11.5	9.5	13	11	14.5	12.5

3.

	Pattern	The next 8 in the sequence							
23	+11, -3	34	31	42	39	50	47	58	55
	+5, +10	28	38	43	53	58	68	73	83
	-5, +9	18	27	22	31	26	35	30	39
	+6, +9	29	38	44	53	59	68	74	83
	-3, +15	20	35	32	47	44	59	56	71

4.

	Pattern	The next 8 in the sequence							
32	+7, -8	39	31	38	30	37	29	36	28
	+9, -11	41	30	39	28	37	26	35	24
	-11, +15	21	36	25	40	29	44	33	48
	+8, +2	40	42	50	52	60	62	70	72
	+13, -6	45	39	52	46	59	53	66	60

Page 67 Make your own pattern

- Teacher check
- +2, +1, +3
-6, +10, +11
-3, +5, -4
+3, -5, +4
+3, +4, +5
-14, +6, +3
+11, +10, +9
+5, +5, +10
+6, +7, +8
-9, +3, -10
-4, +10, -5

Page 68 Identify and continue – 2

1.

1.4	2.8	4.2	5.6	7	8.4	9.8
Pattern is +1.4						
7.1	8.5	9.9	11.3	12.7	14.1	15.5
12.3	13.7	15.1	16.5	17.9	19.3	20.7
18.9	20.3	21.7	23.1	24.5	25.9	27.3

2.

33.1	32.2	31.3	30.4	29.5	28.6	27.7
Pattern is -0.9						
17.9	17	16.1	15.2	14.3	13.4	12.5
77.5	76.6	75.7	74.8	73.9	73	72.1
56.1	55.2	54.3	53.4	52.5	51.6	50.7

3.

12.3	15.5	18.7	21.9	25.1	28.3	31.5
Pattern is +3.2						
44.8	48	51.2	54.4	57.6	60.8	64
87.1	90.3	93.5	96.7	99.9	103.1	106.3
92.6	95.8	99	102.2	105.4	108.6	111.8

4.

12.9	12.2	11.5	10.8	10.1	9.4	8.7
Pattern is -0.7						
49.7	49	48.3	47.6	46.9	46.2	45.5
82.5	81.8	81.1	80.4	79.7	79	78.3
101.2	100.5	99.8	99.1	98.4	97.7	97

5.

15.5	21	26.5	32	37.5	43	48.8
Pattern is +5.5						
63.8	69.3	74.8	80.3	85.8	91.3	96.8
1.3	6.8	12.3	17.8	23.3	28.8	34.3
112.7	118.2	123.7	129.2	134.7	140.2	145.7

Page 69 Fiddle with fractions – 1

1.

$\frac{3}{4}$	$1\frac{1}{2}$	$2\frac{1}{4}$	3	$3\frac{3}{4}$	$4\frac{1}{2}$	$5\frac{1}{4}$
Pattern is $+\frac{3}{4}$						
$12\frac{1}{4}$	13	$13\frac{3}{4}$	$14\frac{1}{2}$	$15\frac{1}{4}$	16	$16\frac{3}{4}$
$19\frac{1}{2}$	$20\frac{1}{4}$	21	$21\frac{3}{4}$	$22\frac{1}{2}$	$23\frac{1}{4}$	24
$34\frac{3}{4}$	$35\frac{1}{2}$	$36\frac{1}{4}$	37	$37\frac{3}{4}$	$38\frac{1}{2}$	$39\frac{1}{4}$

2.

$2\frac{1}{2}$	4	$5\frac{1}{2}$	7	$8\frac{1}{2}$	10	$11\frac{1}{2}$
Pattern is $+1\frac{1}{2}$						
$16\frac{1}{2}$	18	$19\frac{1}{2}$	21	$22\frac{1}{2}$	24	$25\frac{1}{2}$
$28\frac{1}{4}$	$29\frac{3}{4}$	$31\frac{1}{4}$	$32\frac{3}{4}$	$34\frac{1}{4}$	$35\frac{3}{4}$	$37\frac{1}{4}$
$55\frac{3}{4}$	$57\frac{1}{4}$	$58\frac{3}{4}$	$60\frac{1}{4}$	$61\frac{3}{4}$	$63\frac{1}{4}$	$64\frac{3}{4}$

3.

$\frac{2}{3}$	$1\frac{1}{3}$	2	$2\frac{2}{3}$	$3\frac{1}{3}$	4	$4\frac{2}{3}$
Pattern is $+\frac{2}{3}$						
$11\frac{1}{3}$	12	$12\frac{2}{3}$	$13\frac{1}{3}$	14	$14\frac{2}{3}$	$15\frac{1}{3}$
$23\frac{2}{3}$	$24\frac{1}{3}$	25	$25\frac{2}{3}$	$26\frac{1}{3}$	27	$27\frac{2}{3}$
48	$48\frac{2}{3}$	$49\frac{1}{3}$	50	$50\frac{2}{3}$	$51\frac{1}{3}$	52

4.

$\frac{5}{8}$	$1\frac{1}{8}$	$1\frac{3}{8}$	$2\frac{1}{8}$	$3\frac{3}{8}$	$3\frac{5}{8}$	$4\frac{1}{8}$
Pattern is $+\frac{3}{8}$						
$15\frac{1}{8}$	$15\frac{5}{8}$	$16\frac{1}{8}$	17	$17\frac{5}{8}$	$18\frac{1}{8}$	$18\frac{5}{8}$
$26\frac{3}{8}$	27	$27\frac{5}{8}$	$28\frac{1}{8}$	$28\frac{5}{8}$	$29\frac{1}{8}$	$30\frac{5}{8}$
$43\frac{5}{8}$	$44\frac{1}{8}$	$44\frac{5}{8}$	$45\frac{1}{8}$	$46\frac{5}{8}$	$46\frac{1}{8}$	$47\frac{5}{8}$

5.

$\frac{1}{10}$	1	$1\frac{1}{10}$	$1\frac{2}{10}$	$2\frac{1}{10}$	$2\frac{2}{10}$	3
Pattern is $+\frac{1}{10}$						
$11\frac{2}{10}$	$11\frac{3}{10}$	12	$12\frac{4}{10}$	$12\frac{5}{10}$	$13\frac{1}{10}$	$13\frac{2}{10}$
$23\frac{3}{10}$	24	$24\frac{4}{10}$	$24\frac{5}{10}$	$25\frac{1}{10}$	$25\frac{2}{10}$	26
$67\frac{4}{10}$	$67\frac{5}{10}$	$68\frac{1}{10}$	$68\frac{2}{10}$	$68\frac{3}{10}$	$69\frac{4}{10}$	$69\frac{5}{10}$

Page 70 Fiddle with fractions – 2

1.

$\frac{1}{4}$	$1\frac{1}{2}$	$2\frac{3}{4}$	4	$5\frac{1}{4}$	$6\frac{1}{2}$	$7\frac{3}{4}$
Pattern is $+1\frac{1}{4}$						
9	$10\frac{1}{4}$	$11\frac{1}{2}$	$12\frac{3}{4}$	14	$15\frac{1}{4}$	$16\frac{1}{2}$
$16\frac{1}{2}$	$17\frac{3}{4}$	19	$20\frac{1}{4}$	$21\frac{1}{2}$	$22\frac{3}{4}$	24
$27\frac{3}{4}$	29	$30\frac{1}{4}$	$31\frac{1}{2}$	$32\frac{3}{4}$	34	$35\frac{1}{4}$

2.

$2\frac{1}{2}$	$2\frac{2}{3}$	3	$3\frac{1}{3}$	$3\frac{2}{3}$	4	$4\frac{1}{3}$
Pattern is $+\frac{1}{3}$						
7	$7\frac{1}{3}$	$7\frac{2}{3}$	8	$8\frac{1}{3}$	$8\frac{2}{3}$	9
$19\frac{2}{3}$	20	$20\frac{1}{3}$	$20\frac{2}{3}$	21	$21\frac{1}{3}$	$21\frac{2}{3}$
$66\frac{1}{3}$	$66\frac{2}{3}$	67	$67\frac{1}{3}$	$67\frac{2}{3}$	68	$68\frac{1}{3}$

3.

$\frac{1}{3}$	2	$3\frac{2}{3}$	$5\frac{1}{3}$	7	$8\frac{2}{3}$	$10\frac{1}{3}$
Pattern is $+1\frac{2}{3}$						
11	$12\frac{2}{3}$	$14\frac{1}{3}$	16	$17\frac{2}{3}$	$19\frac{1}{3}$	21
$28\frac{2}{3}$	$30\frac{1}{3}$	32	$33\frac{2}{3}$	$35\frac{1}{3}$	37	$38\frac{2}{3}$
$55\frac{1}{3}$	57	$58\frac{2}{3}$	$60\frac{1}{3}$	62	$63\frac{2}{3}$	$65\frac{1}{3}$

4.

$2\frac{2}{5}$	$3\frac{3}{5}$	$4\frac{4}{5}$	$5\frac{5}{5}$	$6\frac{6}{5}$	7	$7\frac{7}{5}$
Pattern is $+\frac{1}{5}$						
$14\frac{4}{5}$	$15\frac{4}{5}$	$16\frac{4}{5}$	$17\frac{4}{5}$	$18\frac{4}{5}$	$19\frac{4}{5}$	20
$27\frac{1}{5}$	$28\frac{2}{5}$	29	$29\frac{3}{5}$	$30\frac{4}{5}$	$31\frac{1}{5}$	$32\frac{2}{5}$
$72\frac{1}{2}$	$73\frac{3}{5}$	$74\frac{4}{5}$	$75\frac{1}{5}$	76	$76\frac{2}{5}$	$77\frac{3}{5}$

5.

$2\frac{2}{10}$	$3\frac{1}{2}$	$4\frac{2}{10}$	$4\frac{4}{10}$	$5\frac{6}{10}$	$6\frac{8}{10}$	7
Pattern is $+\frac{7}{10}$						
17	$17\frac{7}{10}$	$18\frac{4}{10}$	$19\frac{1}{10}$	$19\frac{6}{10}$	$20\frac{3}{10}$	$21\frac{2}{10}$
$34\frac{4}{10}$	$35\frac{1}{10}$	$35\frac{8}{10}$	$36\frac{5}{10}$	$37\frac{2}{10}$	$37\frac{9}{10}$	$38\frac{6}{10}$
$51\frac{3}{10}$	$52\frac{4}{10}$	$53\frac{1}{10}$	$53\frac{8}{10}$	$54\frac{5}{10}$	$55\frac{2}{10}$	$55\frac{9}{10}$

P&A – 2

Page 71 How did you do that?

- 1. 12
- 2. 36
- 3. 16
- 4. 6
- 5. 15
- 6. 24
- 7. 3
- 8. 40
- 9. 27
- 10. 26
- 11. 22
- 12. 10

Page 72 Making equations

1. (a) $8 + 5 - 4 = 9$ (b) $15 \div 5 + 7 = 10$
 (c) $9 \div 3 + 2 = 5$ (d) $5 + 6 - 4 = 7$
 (e) $9 \div 3 + 8 = 11$ (f) $9 \times 3 + 3 = 30$
 (g) $8 \div 4 + 5 = 7$ (h) $2 \times 6 + 5 = 17$
 (i) $15 \div 5 + 12 = 15$ (j) $4 \times 3 + 9 = 21$
 (k) $6 \times 5 - 9 = 21$ (l) $7 \times 7 + 8 = 57$
 or $6 \times 5 - 21 = 9$
 (m) $18 \div 6 + 2 = 5$ (n) $9 \times 4 + 5 = 41$

Page 73 Match the questions to the numbers in the middle

Left column	Right column
56	2
36	24
8	45
8	9
21	28
3	72

Page 74 The order of operations – BIMDAS

1. (a) 48 (b) 61 (c) 60 (d) 87
 (e) 62 (f) 86 (g) 110 (h) 58
 (i) 30 (j) 102
2. (a) 64 (b) 35 (c) 18 (d) 24
 (e) 176 (f) 99 (g) 20 (h) 72
 (i) 96 (j) 42
3. (a) 28 (b) 22 (c) 45 (d) 56
 (e) 72 (f) 52 (g) 96 (h) 32
 (i) 121 (j) 108
4. (a) 32 (b) 34 (c) 37 (d) 61
 (e) 79 (f) 62 (g) 37 (h) 47
 (i) 84 (j) 83

Page 75 Solving problems with tables – 1

Sean works **three times** as often as Sally.

Sally works **a quarter** as often as Simon.

Simon works **twice** as often as Sienna.

Sienna works **twice** as often as Sally.

Sally: 12 Sienna: 24 Sean: 36

Sally: 15 Sienna: 30 Sean: 45

Judy earns **a quarter** as much money as Jenni.

Jaxon earns **eight times** as much money as Jai.

Jai earns **half** as much money as Jenni.

Jenni earns **four times** as much money as Judy.

Judy: \$6.50 Jai: \$13 Jenni: \$26

Judy: \$7.50 Jai: \$15 Jenni: \$30

Page 76 Solving problems with tables – 2

Rupert finds **three times** as many 20 cent coins as Riley.

Remy finds **three times** as many 20 cent coins as Rachel.

Rachel finds **double** as many 20 cent coins as Riley.

Riley finds **a sixth** as many 20 cent coins as Remy.

Riley: 13 Rachel: 26 Rupert: 39

Riley: 15 Rachel: 30 Rupert: 45

Annie eats **twice** as many pizzas as Audrey.

Alan eats **two thirds** as many pizzas as Audrey.

Angus eats **five times** as many pizzas as Alan.

Audrey eats **half** as many pizzas as Annie.

Alan: 12 Annie: 36 Angus: 60

Alan: 17 Annie: 51 Angus: 85

Page 77 More equivalent number sentences

Left column	Right column
4	3
2	8
8	3
1	30
32	4
6	28
9	21

Page 78 Well-known tables sentence trees

1. (a) 6 (b) 5 (c) 3 (d) 1
 (e) 9 (f) 10 (g) 4 (h) 3
 (i) 7 (j) 4
2. (a) 6 (b) 2, 5 (c) 3, 5 (d) 3
 (e) 3 (f) 7 (g) 7 (h) 11
 (i) 4 (j) 10
3. (a) 5 (b) 9 (c) 8 (d) 6
 (e) 23 (f) 4 (g) 11 (h) 6
 (i) 56 (j) 72
4. (a) 7 (b) 31, 2 (c) 26 (d) 11
 (e) 6 (f) 27 (g) 7 (h) 4
 (i) 3 (j) 80