Mathletics

Addition and Subtraction

Series E – Addition and Subtraction

Contents

Series Author:

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Series E – Addition and Subtraction

Pages 1–2

1a

7	4	(14)
(10)	1	(6)
(10)	(12)	8

b

(26)	(12)	(30)	20
(24)	(38)	(15)	35
17	(45)	5	(40)
(33)	(18)	32	(10)

2a

b
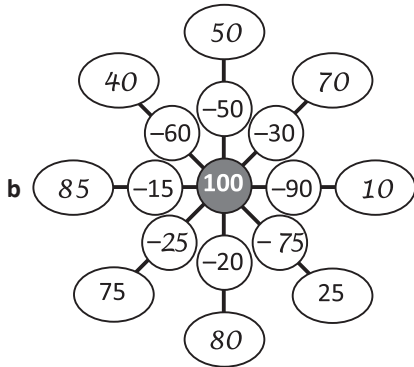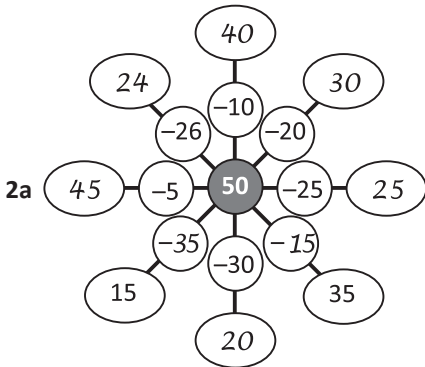
3b (18 + 2) + (30 + 20) + (10 + 10)

= 20 + 50 + 20 = 90

c (25 + 25) + 40 + (30 + 20) + 10

= 50 + 40 + 50 + 10 = 150

d (15 + 35) + (20 + 30) + 10 + 12

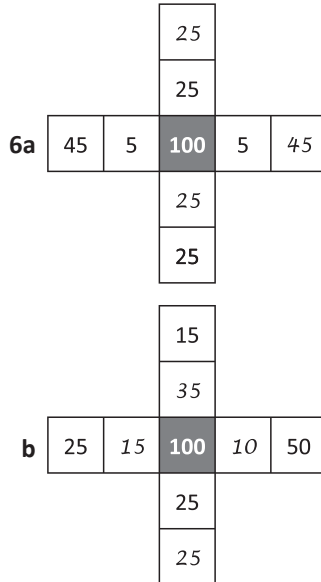= 50 + 50 + 10 + 12 = 122

4a 12

b 33

c 25

d 18

e 4

f 22

g 36

h 43

5a 46

b 78

c 54

d 67

e 38

f 75

g 55

h 52

6a

		25		
		25		
45	5	**100**	5	45
		25		
		25		

b

		15		
		35		
25	15	**100**	10	50
		25		
		25		

Pages 3–4

1

+	0	1	2	3	4	5	6	7	8	9
0	0	1	2	3	4	5	6	7	8	9
1	1	(2)	3	4	5	6	7	8	9	10
2	2	3	(4)	5	6	7	8	9	10	11
3	3	4	5	(6)	7	8	9	10	11	12
4	4	5	6	7	(8)	9	10	11	12	13
5	5	6	7	8	9	(10)	11	12	13	14
6	6	7	8	9	10	11	(12)	13	14	15
7	7	8	9	10	11	12	13	(14)	15	16
8	8	9	10	11	12	13	14	15	(16)	17
9	9	10	11	12	13	14	15	16	17	(18)

1a 2; 4; 6; 8; 10; 12; 14; 16; 18

b 3; 5; 7; 9; 11; 13; 15; 17; 19

c 1; 3; 5; 7; 9; 11; 13; 15; 17
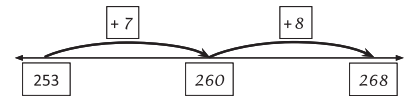
2a

b
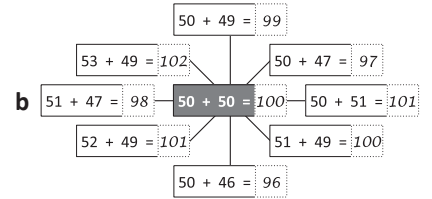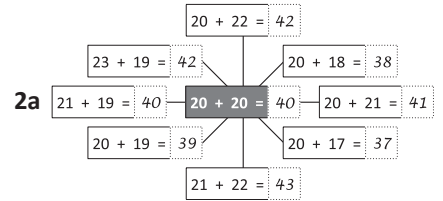
3a Think double 30, add 2, so the answer is 62.

b Think double 25, subtract 2, so the answer is 48.

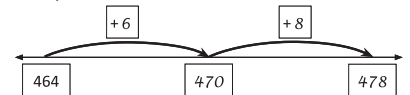**c** Think double 100, subtract 3, so the answer is 197.

Pages 5–6

1b + 7; 250

c + 2; 560

d + 3; 170

e + 4; 350

f + 1; 180

2a 268;

b 478;

c 688
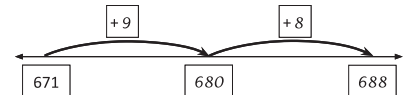
3a–c Answers will vary.

Series E – Addition and Subtraction

Pages 5–6

4a

+	356	78	586	287	385	984
12	*368*	*90*	*598*	*299*	*397*	*996*

b

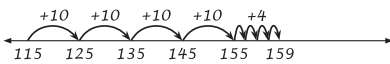| +	298	566	252	176	368	146
16	*314*	*582*	*268*	*192*	*384*	*162*

Pages 7–8

1a 22; 32; 42; 52; 62; 72

b 63; 73; 83; 93; 103; 113

c 133; 143; 153; 163; 173; 183

2a 130;
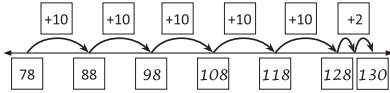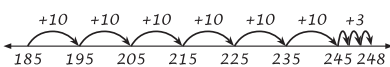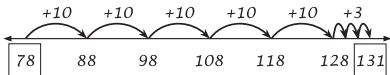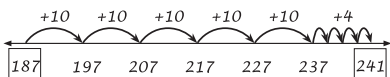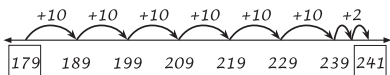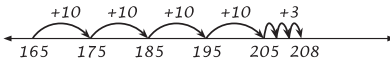
```
+10  +10  +10  +10  +10  +2
78   88   98  108  118  128 130
```

b 159;

```
+10  +10  +10  +10  +4
115  125  135  145  155  159
```

c 248;

```
+10  +10  +10  +10  +10  +10  +3
185  195  205  215  225  235  245 248
```

3a 78 + 53 = 131;

```
+10  +10  +10  +10  +10  +3
78   88   98  108  118  128 131
```

b 187 + 54 = 241;

```
+10  +10  +10  +10  +10  +4
187  197  207  217  227  237  241
```

c 179 + 62 = 241;

```
+10  +10  +10  +10  +10  +10  +2
179  189  199  209  219  229  239 241
```

4a 165 + 43 = 208;

```
+10  +10  +10  +10  +3
165  175  185  195  205 208
```

b 82 + 55 = 137;

```
+10  +10  +10  +10  +10  +5
82   92  102  112  122  132 137
```

c 135 + 36 = 171;

```
+10  +10  +10  +6
135  145  155  165  171
```

Page 9

1b 63 ⟨ 60 / 3 ⟩

c 52 ⟨ 50 / 2 ⟩

d 27 ⟨ 20 / 7 ⟩
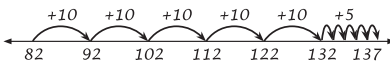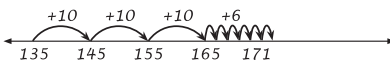
2

+	20	50	30	70	60
123	*143*	*173*	*153*	*193*	*183*
214	*234*	*264*	*244*	*284*	*274*

3b 65 + 38 ⟨ 30 / 8 ⟩ → | 65 + 30 = 95 | → | 95 + 8 = 103 |

c 112 + 25 ⟨ 20 / 5 ⟩ → | 112 + 20 = 132 | → | 132 + 5 = 137 |

d 332 + 66 ⟨ 60 / 6 ⟩ → | 332 + 60 = 392 | → | 392 + 6 = 398 |

Page 10

1a 63 + 37 = (6 tens + 3 tens) + (3 ones + 7 ones)

= 9 tens + 10 ones

= 100

b 88 + 23 = (8 tens + 2 tens) + (8 ones + 3 ones)

= 10 tens + 11 ones

= 111

c 56 + 15 = (5 tens + 1 tens) + (6 ones + 5 ones)

= 6 tens + 11 ones

= 71

d 65 + 28 = (6 tens + 2 tens) + (5 ones + 8 ones)

= 8 tens + 13 ones

= 93

2

+	23	78	63	55	36
45	*68*	*123*	*108*	*100*	*81*
39	*62*	*117*	*102*	*94*	*75*

Page 11

1a
```
    267      243
       55  31
238   26  212 +  46   258
       52  68
    264      280
```

b
```
    162      206
       34  78
142   14  128 +  61   189
       31  27
    159      155
```
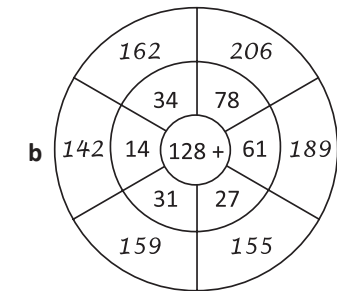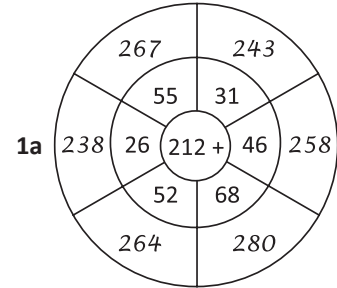
2a 80

b 170

c 150

d 5

e 120

f 16

3a 3 tens + 9 ones, 39

b 3 tens, + 8 ones, 38

c 3 tens + 11 ones, 41

d 3 tens + 10 ones, 40

e 3 tens + 8 ones, 38;
Lily

Pages 12–13

1a 150

b 40

c 50

d 110

e 100

f 200

Series E – Addition and Subtraction

Pages 12–13

2a 32 + 29   = $\boxed{61}$

32 + 30 -1

___62___ -1 = $\boxed{61}$

b 55 + 38   = $\boxed{93}$

55 + 40 -2

___95___ -2 = $\boxed{93}$

c 66 + 19   = $\boxed{85}$

66 + _20_ -1

___86___ -1 = $\boxed{85}$

d 22 + 39   = $\boxed{61}$

22 + _40_ -1

___62___ -1 = $\boxed{61}$

Page 13

3a 75 + 22   = $\boxed{97}$

75 + 20 $2+$

___95___ $2+$ = $\boxed{97}$

b 45 + 41   = $\boxed{86}$

45 + 40 $1+$

___85___ $1+$ = $\boxed{86}$

c 26 + 32   = $\boxed{58}$

26 + _30_ $2+$

___56___ $2+$ = $\boxed{58}$

d 66 + 53   = $\boxed{119}$

66 + _50_ $3+$

___116___ $3+$ = $\boxed{119}$

4

R	A	C	E	C	A	R
156	173	106	743	106	173	156

Pages 14–15

What to do

Observe students.

Page 16

1b   [45]   [55]

45 + 55 = 100

100 − 45 = 55

100 − 55 = 45

c   [73]   [27]

73 + 27 = 100

100 − 73 = 27

100 − 27 = 73

d   [105]   [15]

105 + 15 = 120

120 − 105 = 15

120 − 15 = 105

e   [120]   [10]

120 + 10 = 130

130 − 120 = 10

130 − 10 = 120

f   [135]   [10]

135 + 10 = 145

145 − 135 = 10

145 − 10 = 135

2a 160; 145; 195; 225

b 150; 175; 145; 200

c 110; 160; 210; 190

d 100; 135; 150; 125

Pages 17–19

Set 1 8; 18; 28; 38; 48; 58

Set 2 15; 25; 35; 45; 55; 65

2a 3; 30; 300

b 6; 60; 600

c 10; 240 − 140 = 100;
2,400 − 1,400 = 1,000

d 37; 690 − 320 = 370;
6,900 − 3,200 = 3,700

3a 3

b 5

c 7

d 3

e 6

f 4

g 6

h 3

i 5

4a Out: 2; 5; 8; 6

b Out: 6; 8; 12; 5

c Out: 9; 3; 7; 5

5

¹2	0		²1	1		³9	5
2		⁴7	2		⁵7	8	⁶8
	⁷3	6		⁸5	1		⁹3	9
¹⁰4	8		¹¹3	4		¹²2	5

Across

1 20
2 11
3 95
4 72
5 78
7 36
8 51
9 39
10 48
11 34
12 25

Down

1 22
2 12
3 98
4 76
5 71
6 89
7 38
8 54
9 35

Series E – Addition and Subtraction

Pages 17–19

6a

See		Think
19 − 9 =	10	(18 − 9) + 1
201 − 100 =	101	(200 − 100) + 1
141 − 70 =	71	(140 − 70) + 1
71 − 35 =	36	(70 − 35) + 1

b

See		Think
15 − 8 =	7	(16 − 8) − 1
31 − 16 =	15	(32 − 16) − 1
99 − 50 =	49	(100 − 0) − 1
87 − 44 =	43	(88 − 44) − 1

c

See		Think
26 − 12 =	14	(24 − 12) + 2
52 − 25 =	27	(50 − 25) + 2
68 − 33 =	35	(66 − 33) + 2
104 − 51 =	53	(102 − 51) + 2

d

See		Think
24 − 13 =	11	(26 − 13) − 2
48 − 25 =	23	(50 − 25) − 2
70 − 36 =	34	(72 − 36) − 2
78 − 40 =	38	(80 − 40) − 2
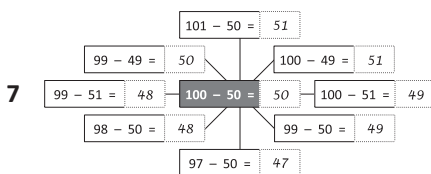
7

	101 − 50 =	51	
99 − 49 = 50			100 − 49 = 51
99 − 51 = 48	**100 − 50 =** 50		100 − 51 = 49
98 − 50 = 48			99 − 50 = 49
	97 − 50 =	47	

Pages 20–21

1a 83;

−2 −10 −10 −10 −10
83 85   95   105 115 125

b 132;

−6 −10 −10 −10
132 138 148 158 168

1c 281;

−4 −10 −10 −10 −10 −10
281 285 295 305 315 325 335

d 200;

−5 −10 −10 −10 −10
200 205 215 225 235 245

2a 254 − 45 = 209;

−5 −10 −10 −10 −10
209 214 224 234 244 254

b 186 − 58 = 128;

−8 −10 −10 −10 −10 −10
128 136 146 156 166 176 186

c 145 − 65 = 80;

−5 −10 −10 −10 −10 −10 −10
85 95 105 115 125 135 145

d 165 − 34 = 131;

−4 −10 −10 −10
131 135 145 155 165

Pages 22–23

1a 482
- 400
- 80
- 2

b 675
- 600
- 70
- 5

c 732
- 700
- 30
- 2

d 834
- 800
- 30
- 4
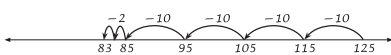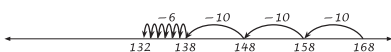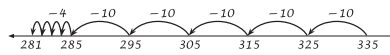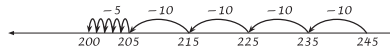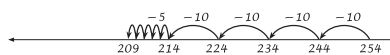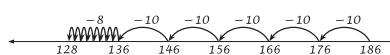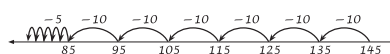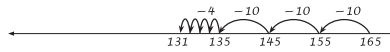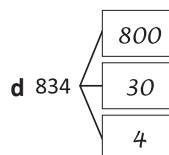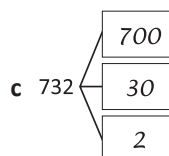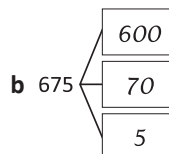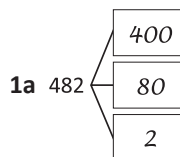
2a 568, 548, 248, 238

b 363, 313, 293, 243

3a 456 − 212
- 200
- 10
- 2
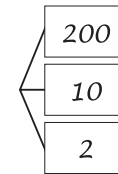
456 − 200 = _256_

256 − 10 = _246_

246 − 2 = _244_

So, 456 − 212 = _244_

3b 378 − 165
- 100
- 60
- 5
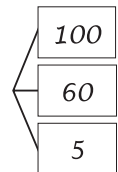
378 − 100 = _278_

278 − 60 = _218_

218 − 5 = _213_

So, 378 − 165 = _213_

4a 434;

479 − 45 < 40 / 5

479 − 40 = 439

439 − 5 = 434

So, 45 − 479 = _434_

b 813;

834 − 21 < 20 / 1

834 − 20 = 814

814 − 1 = 813

So, 21 − 834 = _813_

c 325;

637 − 312 < 300 / 10 / 2

637 − 300 = 337

337 − 10 = 327

327 − 2 = 325

So, 312 − 637 = _325_

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Pages 22–23

4d 335;

$$567 - 232 \begin{cases} 200 \\ 30 \\ 2 \end{cases}$$

567 − 200 = 367

367 − 30 = 337

337 − 2 = 335

So, 232 − 567 = ___335___

5a

175	
130	45

| 108 | 22 | 23 |

b

370	
235	135

| 155 | 80 | 55 |

c

220	
125	95

| 85 | 40 | 55 |

d

530	
250	280

| 130 | 120 | 160 |

Pages 24–25

1b 60 − 1

c 60 + 2

d 20 + 3

e 90 − 3

f 100 − 1

g 100 + 3

h 20 + 1

i 90 − 2

2a 107;

136 − 30 (+1)

___106___ (+1) = ___107___

2b 107;

145 − 40 (+2)

___105___ (+2) = ___107___

c 117;

156 − __40__ (+1)

___116___ (+1) = ___117___

d 136;

184 − __50__ (+2)

___134___ (+2) = ___136___

e 116;

145 − 30 (+1)

___115___ (+1) = ___116___

f 107;

___176 − 70___ (+1)

___106___ (+1) = ___107___

g 323;

___365 − 40___ (−2)

___325___ (−2) = ___323___

h 218;

___250 − 30___ (−2)

___220___ (−2) = ___218___

3 your fingerprints

Page 26

e:	100

1a

57 + 49 = | 106 |

| 106 | − | 49 | = | 57 |

e:	30

1b

79 − 53 = | 26 |

| 53 | + | 26 | = | 79 |

e:	70

c

123 − 47 = | 76 |

| 47 | + | 76 | = | 123 |

e:	230

d

159 + 73 = | 232 |

| 232 | − | 73 | = | 159 |

e:	290

e

141 + 153 = | 294 |

| 294 | − | 153 | = | 141 |

e:	220

f

346 − 122 = | 224 |

| 224 | + | 122 | = | 346 |

Page 27

What to do

Observe students.

Page 28

What to do

a

125	−	75	=	50
−		−		−
53	−	39	=	14
=		=		=
72	−	36	=	36

b

350	−	228	=	122
−		−		−
165	−	111	=	54
=		=		=
185	−	117	=	68

Series E – Addition and Subtraction

1b 270 + 120 = 390

c 360 + 220 = 580

d 380 + 120 = 500

e 590 + 400 = 990

f 410 + 100 = 510

g 190 + 110 = 300

h 910 + 210 = 1,120

e: 570

2a

H	T	O
3	5	4
+ 2	1	7
5	7	1
☐	1	

e: 840

b

H	T	O
6	2	8
+ 2	1	3
8	4	1
☐	1	

e: 590

c

H	T	O
3	6	4
+ 2	2	8
5	9	2
☐	1	

e: 400

d

H	T	O
2	6	3
+ 1	3	9
4	0	2
1	1	

e: 800

2e

H	T	O
3	4	4
+ 4	5	9
8	0	3
1	1	

e: 500

f

Th	H	T	O
	2	5	2
+	2	4	9
	5	0	1
☐	1	1	

e: 810

g

Th	H	T	O
	2	6	2
+	5	4	9
	8	1	1
☐	1	1	

e: 920

h

Th	H	T	O
	6	2	9
+	2	8	9
	9	1	8
☐	1	1	

e: 740

i

Th	H	T	O
	3	4	9
+	3	8	7
	7	3	6
☐	1	1	

3a

H	T	O
4	5	6
+ 4	5	8
9	1	4
1	1	

b

Th	H	T	O
	3	8	9
+	6	7	8
1	0	6	7
☐	1	1	

e: 320

1a

H	T	O
☐	4	1
6	5̸	2
– 3	2	7
3	2	5

e: 530

b

H	T	O
☐	5	1
7	6̸	1
– 2	2	9
5	3	2

e: 140

c

H	T	O
☐	8	1
5	9̸	2
– 4	4	8
1	4	4

e: 230

d

H	T	O
☐	7	1
5	8̸	2
– 3	4	6
2	3	6

e: 210

1e

H	T	O
☐	4	1
6	5̸	1
– 4	3	8
2	1	3

e: 310

f

H	T	O
☐	5	1
9	6̸	2
– 6	4	9
3	1	3

e: 210

g

H	T	O
☐	7	1
8	8̸	2
– 6	6	6
2	1	6

e: 400

h

H	T	O
☐	3	1
7	4̸	3
– 3	3	9
4	0	4

2a

H	T	O	
6	8̸9	12	
– 5	6	7	
1	2	5	km

b

H	T	O	
7̸8	18 9̸	13	
– 5	9	5	
2	9	8	km

Series E – Addition and Subtraction

Pages 31–32

2c

	H	T	O	
	⁸9̶	¹⁶7̶	¹1	
−	6	9	2	
	2	7	9	km

d

	H	T	O	
	8	⁸9̶	¹3	
−	5	6	7	
	3	2	6	km

Page 33

1a

	Th	H	T	O
		3	3	5	3
+		1	0	2	1
	4	3	7	4

b

	Th	H	T	O
		2	5	4	6
+		5	4	3	1
	7	9	7	7

c

	Th	H	T	O
		4	5	2	4
+		2	1	6	4
	6	6	8	8

d

	Th	H	T	O
		3	6	3	1
+		1	3	5	7
	4	9	8	8

1e

	Th	H	T	O
		1	2	5	2
+		5	3	3	3
	6	5	8	5

f

	Th	H	T	O
		2	4	3	2
+		5	3	4	6
	7	7	7	8

2a

	Th	H	T	O
		6	6	3	8
+		1	2	3	6
	7	8	7	4
				1	

b

	Th	H	T	O
		4	2	4	5
+		2	5	1	7
	6	7	6	2
				1	

c

	Th	H	T	O
		3	4	2	9
+		1	1	3	9
	4	5	6	8
				1	

3a

	Th	H	T	O
		2	4	6	6
+		2	1	8	7
	4	6	5	3
			1	1	

3b

	Th	H	T	O
		3	1	8	7
+		3	0	5	9
	6	2	4	6
			1	1	

c

	Th	H	T	O
		3	2	9	6
+		2	1	5	8
	5	4	5	4
			1	1	

Page 34

1a

	Th	H	T	O
		6	4	9	3
−		3	2	7	1
	3	2	2	2

b

	Th	H	T	O
		4	2	7	5
−		4	0	6	5
		2	1	0

c

	Th	H	T	O
		8	4	7	9
−		3	4	5	6
	5	0	2	3

d

	Th	H	T	O
		7	1	6	3
−		4	0	2	0
	3	1	4	3

e

	Th	H	T	O
		3	2	9	8
−		3	0	6	4
		2	3	4

f

	Th	H	T	O
		9	9	3	6
−		8	1	3	3
	1	8	0	3

2a

	Th	H	T	O
		5	4	²3̶	¹6
−		3	3	1	8
	2	1	1	8

b

	Th	H	T	O
		2	⁶7̶	¹2	8
−		1	5	4	7
	1	1	8	1

c

	Th	H	T	O
		⁵6̶	¹3	4	7
−		2	6	1	5
	3	7	3	2

d

	Th	H	T	O
		³4̶	¹5	⁶7̶	¹2
−		2	6	5	4
	1	9	1	8

e

	Th	H	T	O
		9	²3̶	¹⁰1̶	4
−		8	1	5	7
	1	1	5	7

Series E – Addition and Subtraction

Page 34

2f

	Th	H	T	O
		7	10	1
	5	8̸	1̸	5̸
−	3	7	8	9
	2	0	2	6

Page 35

1a

	3	6	2
+	4	3	7
	7	9	9

b

	8	6	5
−	4	3	2
	4	3	3

c

	6	3	5
+	2	1	3
	8	4	8

d

	5	6	7
−	3	2	4
	2	4	3

2a 5

b 5

c 4

d 5

Pages 36–37

1a 1 120, 42, 74

    2 'lends', 'lost' = subtraction

Step 1: 120 − 42 = 78

Step 1: 78 − 74 = 4

Answer: He has lost 4 cards.

1b 1 32, 47, 130

    2 'earn' = addition, but one figure missing so need to subtract from 'total'

Step 1: 32 + 47 = 79

Step 1: 130 − 79 = 51

Answer: The class earned 51 points in the third term.

c 1 125, 232, 480

    2 'and' = addition, 'less' = subtraction

Step 1: 125 + 232 = 357

Step 1: 480 − 357 = 123

Answer: Our team lost by 123 points.

Page 38

What to do
Observe students.

Page 39

What to do
Observe students.

Pages 40–41

1a £18

b £37

c £6

d £22

2a–c Answers will vary.

Page 42

1a Workings will vary; £32

b Workings will vary; £28

c Workings will vary; £3.50

d Workings will vary; £60

e Workings will vary; £25

f Workings will vary; £8

Page 43

1a Answers will vary.
Sample answer:

Sausage rolls	£3.20
Cola	+ £3.25
=	£6.45

£10 − £6.45 = £3.55

Change = £3.55

b Burgers

c

Heidi's shopping list:

2 packs of sausage rolls ..	£6.40
4 packs of pizza slices	£35.80
10 party hats	£3.80
20 balloons	£3.80
Orange juice	£2.75
Lemonade......................	£3.10
Total	£55.65

d Answers will vary.

Pages 44–45

What to do
Observe students.

Pages 46–47

1a 21, 31, 41, 51, 61, 71, 81

b 60, 65, 70, 75, 80, 85, 90

c 36, 32, 28, 24, 20, 16, 12

2 Backwards by 10:

a 112 ⟩ 102 ⟩ 92 ⟩ 82 ⟩ 72

b 219 ⟩ 209 ⟩ 199 ⟩ 189 ⟩ 179

c 583 ⟩ 573 ⟩ 563 ⟩ 553 ⟩ 543

Backwards by 100:

a 673 ⟩ 573 ⟩ 473 ⟩ 373 ⟩ 273

b 798 ⟩ 698 ⟩ 598 ⟩ 498 ⟩ 398

c 1,010 ⟩ 910 ⟩ 810 ⟩ 710 ⟩ 610

Series E – Addition and Subtraction

Pages 46–47

3a 234; 334; Add 100

  b 117; 87; Subtract 10

  c 708; 608; Subtract 100

  d 137; 167; Add 10

4a

15	16	17	18
25	26	27	28
35	36	37	38
45	46	47	48

b

32	35	38	41
38	41	44	47
44	47	50	53
50	53	56	59

c

30	34	38	42
35	39	43	47
40	44	48	52
45	49	53	5

d

18	27	36	45
25	34	43	52
32	41	50	59
39	48	57	66

5a 54; 27;
    Rule: − 9

  b 57; 49; 41
    Rule: − 8

  c 44; 59; 69
    Rule: + 5

  d 42; 63
    Rule: + 7

Page 48

1a RULE: + 11

  b RULE: − 25

2a RULE: − 39
    OUT: 39; 51; 6

  b OUT: 134; 127; 81

3a IN: 46; 62; 122

  b IN: 68; 277; 112

Page 49

1a 50 + 70 ≠ 200

  b Answers will vary ≠ 45 + 65

  c 185 ≠ 35 + Answers will vary

  d 30 + Answers will vary ≠ 160

2a 15, 35

  b 20, 15
    or 20 + 35 ≠ 50

  c 20, 15

  d 15, 35
    or 20 + 35 ≠ 35

Page 50
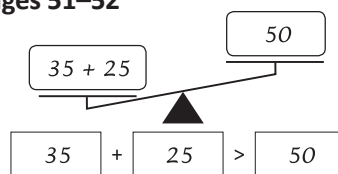
1a 4; 5 + 4 = 9

  b 3; 5 + 3 = 8

2a 30; 30 + 55 = 85

  b 55; 45 + 55 = 100

Pages 51–52

1b

35 + 25 > 50
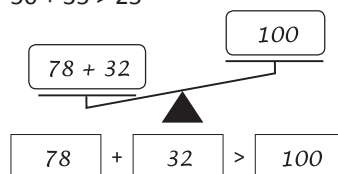or 50 + 25 > 35
or 50 + 35 > 25

c

78 + 32 > 100
or 100 + 32 > 78
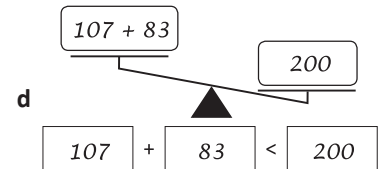or 100 + 78 > 32

d

107 + 83 < 200

2 12; 9; 16

3a–h Answers will vary.

4 £27; £26; >

Page 53

What to do

11; 15; 9;

10; 2; 11

16; 11; 1

Page 21

What to do

Addition mental strategies

1 **Circle the bonds to 100:**

80	20	30	20
50	38	15	60
50	45	55	40
30	70	10	90

2 **Complete these addition grids:**

+	12	15	14	8
64				
15				
82				

3 **Show how to use bridge to ten to add these:**

a 147 + 15 = ☐
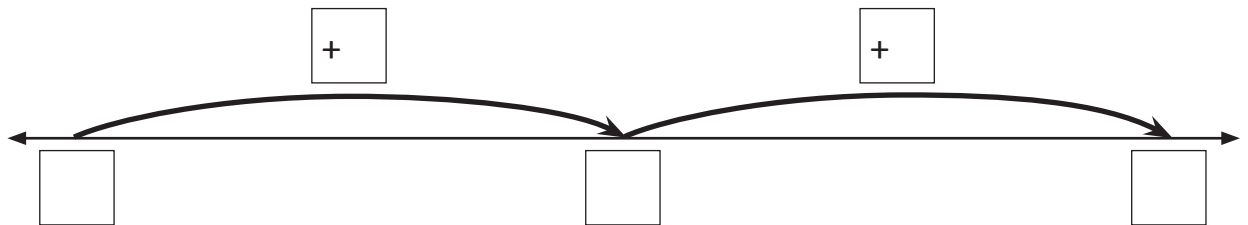
b 235 + 16 = ☐
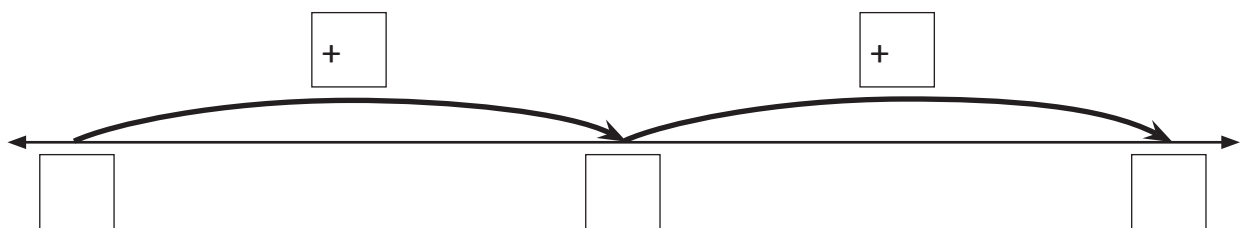
Skills	Not yet	Kind of	Got it
• Recalls bonds to 50 and 100			
• Recalls addition facts 2-digit plus 1-digit to 99			
• Uses mental strategies to solve addition or subtraction problems: bridge to ten			

Addition mental strategies

4 **Add these using the jump strategy:**

a 128 + 13 = ◻

⟵—————————————————————⟶

b 157 + 25 = ◻

⟵—————————————————————⟶

···

5 **Add these using both methods of the split strategy:**

a 68 + 35 = (◻ tens + ◻ tens) + (◻ ones + ◻ ones)

= ◻ tens + ◻ ones
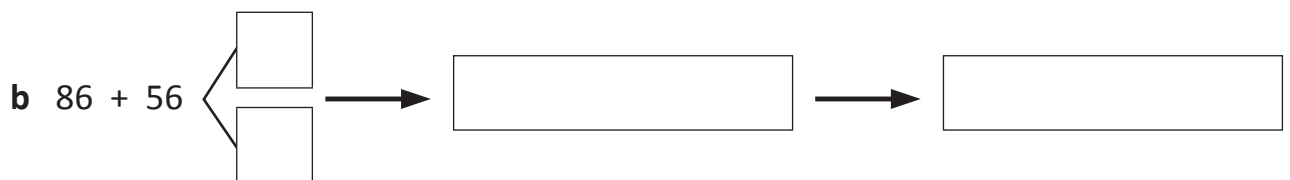
= ◻

b 86 + 56

···

Skills	Not yet	Kind of	Got it
• Uses mental strategies to solve addition or subtraction problems: the jump, split strategy and compensation			

Addition mental strategies

6 **Add these using compensation:**

a 55 + 39 = [ ]

55 + 40 ( )

_____ ( ) = [ ]

b 46 + 28 = [ ]

46 + 30 ( )

_____ ( ) = [ ]

....

7 **Solve these word problems using addition mental strategies. Show all of your working.**

a Cam and Matt went on a hiking trip. To get there, they drove 75 km on the first day and 48 km on the second day. How far away did they travel?

b Matilda collects coloured paper clips. She has 73 purple ones and 48 yellow ones. How many does she have in her collection?

....

Skills	Not yet	Kind of	Got it
• Uses a mental strategy to solve word problems			

Subtraction mental strategies   Name _____

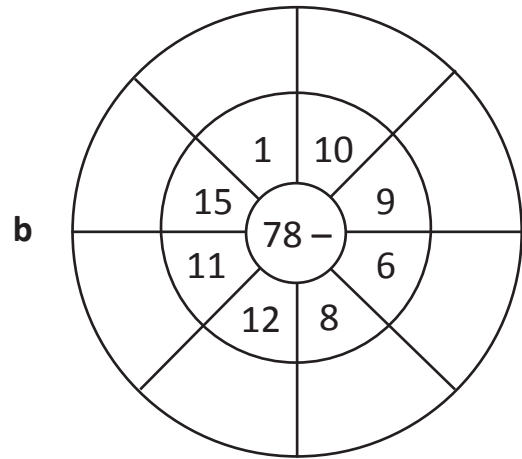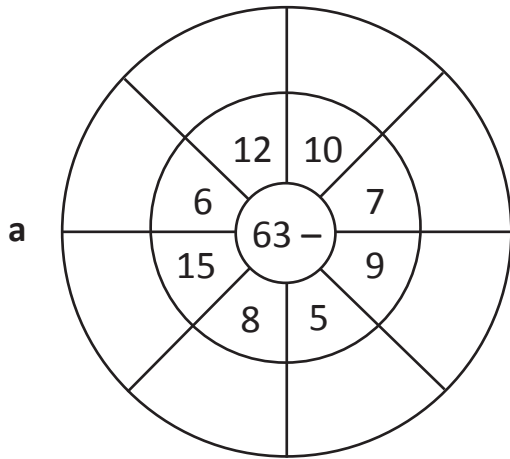**1** **Make a group of addition and subtraction facts for each pair of numbers:**

a   [38]   [25]

b   [72]   [18]

c   [36]   [13]

....

2 **Complete these subtraction wheels:**

a

12 | 10
6 | 7
63 −
15 | 9
8 | 5

b

1 | 10
15 | 9
78 −
11 | 6
12 | 8

....

3 **Subtract this using the jump strategy:**

114 − 35 = [   ]

←————————————————————————→

....

Skills	Not yet	Kind of	Got it
• Uses inverse relationship between addition and subtraction to extend number facts			
• Recalls subtraction facts 2-digit subtract 1-digit to 99			

Subtraction mental strategies

4 **Use the split strategy with these problems:**
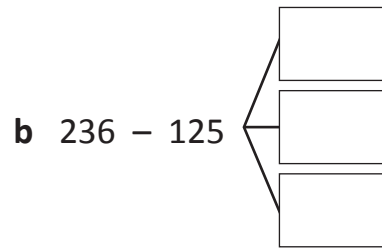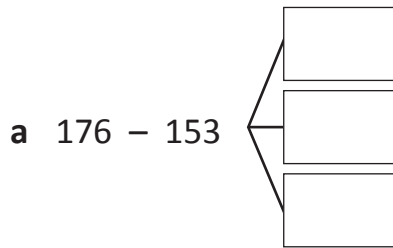
a 176 − 153

b 236 − 125

So, 176 − 153 = _____

So, 236 − 125 = _____

....

5 **Use the compensation strategy with these problems:**

a 155 − 31 = ☐

b 266 − 29 = ☐

....

Skills	Not yet	Kind of	Got it
• Uses mental strategies to solve addition or subtraction problems: the jump strategy, the split strategy and the compensation strategy			

Subtraction mental strategies   Name _____

6 Estimate the answers to these calculations before solving them and checking the answers using inverse operations.

a   e: [ ]

46   +   52   = [ ]

[ ]   –   [ ]   = [ ]

b   e: [ ]

87   –   39   = [ ]

[ ]   +   [ ]   = [ ]

c   e: [ ]

263   –   141   = [ ]

[ ]   +   [ ]   = [ ]

d   e: [ ]

172   +   119   = [ ]

[ ]   –   [ ]   = [ ]

7 Sove these two-step word problems:

a Newtown United score 36 goals in one season and 57 goals in the next season. Their rivals Newtown City score 94 goals over the two seasons. How many more goals have City scored than United?

b Sarah is saving up for a new bike. She has saved £153. She then gets £65 for her birthday. If the new bike costs £250, how much more money does she need?

Skills	Not yet	Kind of	Got it
• Uses inverse operations to check an answer			
• Solves two-step addition and subtraction word problems			

Written methods

Name _____

1 **Add these using the written method. Start by writing your estimate to the nearest 10.**

e: _____

a
	Th	H	T	O
		1	3	8
+		3	8	9

e: _____

b
	Th	H	T	O
		2	5	4
+		2	6	8

e: _____

c
	Th	H	T	O
		2	9	1
+		7	6	7

e: _____

d
	Th	H	T	O
	4	7	6	2
+		6	5	7

e: _____

e
	Th	H	T	O
	5	8	5	8
+	3	8	9	9

e: _____

f
	Th	H	T	O
	3	8	0	8
+	9	7	7	1

Skills	Not yet	Kind of	Got it
• Makes a reasonable estimate by rounding to the nearest 10			
• Uses written methods to add 3-digit and 4-digit numbers including regrouping			

Written methods

2 **Subtract these 3-digit numbers using the written method. Start by writing your estimate to the nearest 10.**

e:

a

	H	T	O
	4	4	4
−	3	1	6

e:

b

	H	T	O
	7	4	3
−	3	2	9

e:

c

	H	T	O
	4	6	1
−	1	1	9

e:

d

	Th	H	T	O
	1	5	5	2
−		2	7	8

e:

e

	Th	H	T	O
	3	3	4	2
−		2	1	8	9

e:

f

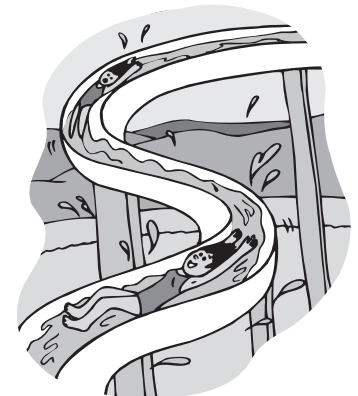|	Th	H	T	O
	6	5	1	3
−		4	4	4	7

**3** **Solve this word problem:**

On the first day of the school holidays, 458 people went to the wet and wild waterslide park. On the last day, there were 673 people. How many more people went on the last day?

	H	T	O

Skills	Not yet	Kind of	Got it
• Makes a reasonable estimate by rounding to the nearest 10			
• Uses written methods to add 3-digit and 4-digit numbers including regrouping			

Money

1 **Here are the different notes and coins in our system:**
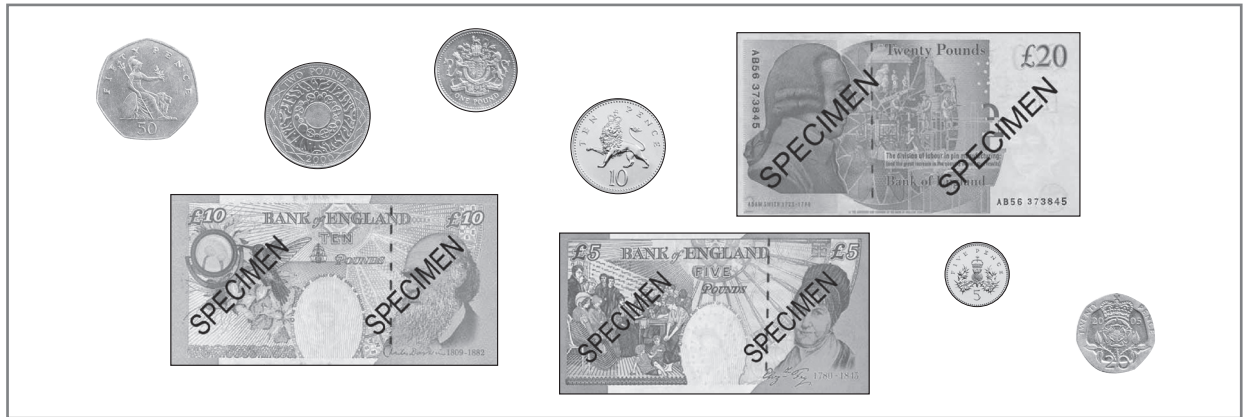
Make up each amount from a combination of these notes and coins. Just draw an outline (circles for coins and rectangles for notes) and write the number.

a Show £10 using notes and coins:

b Show £12.50 using notes and coins:

Skills	Not yet	Kind of	Got it
• Represents money values in multiple ways using coins and notes or just coins			

Money

2 **Find the change for each amount below. You could bridge to the next pound and count on or use a written subtraction. Show all your workings.**
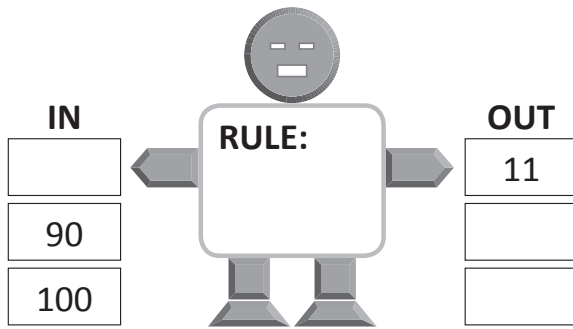
a I had £50. I spent £26.50.

Change = [   ]
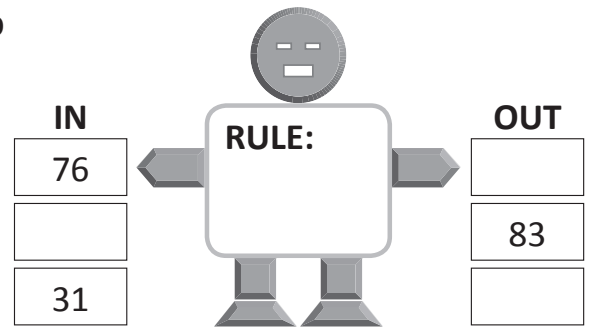
b I had £100. I spent £67.80.

Change = [   ]

Skills	Not yet	Kind of	Got it
• Calculates the change from whole pound amounts			

Patterns and algebra

Name _____

1 **Complete the missing boxes in these function machines and identify the rule.**

a

IN	RULE:	OUT
		11
90		
100		

b

IN	RULE:	OUT
76		
		83
31		

2 **Complete these number patterns by looking for skip counting patterns:**

a

7			28	35			

b

	72		54		36		

3 **Colour the skip counting pattern for 4s up to 30.**

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

a If you kept going on a complete hundred grid, would 54 be coloured in?

Yes   /   No

b How can you tell without using a whole hundred grid?

_____

4 **Figure out the missing numbers in each pattern and write the rule:**

a   56   49   ☐   35   28   ☐

Rule: _____

b   30   36   42   ☐ ☐ ☐

Rule: _____

Skills	Not yet	Kind of	Got it
• Completes a skip counting pattern			
• Completes a number pattern and write the rule in words			

Patterns and algebra

5 Use the numbers in the number squares to identify the patterns and complete the number squares.

a

		49	
			61
65	67		

b

25			
32			
		48	
		64	73

....

6 Complete this equation to show it on the balanced scales:

a

30 + ☐   100

☐ + ☐ = ☐

b
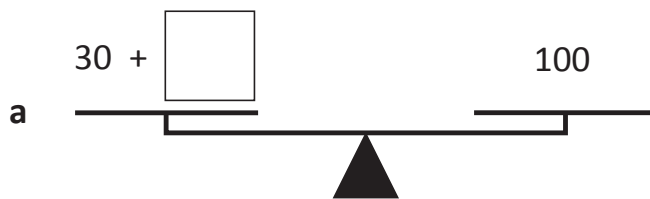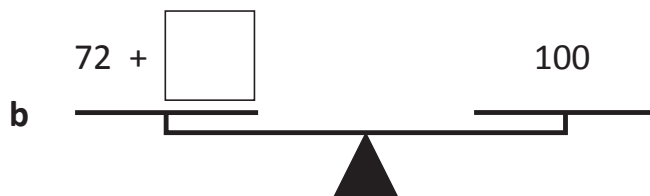
72 + ☐   100

☐ + ☐ = ☐

....

7 Complete the number sentences below by writing numbers in the blank boxes:

a ☐ 25 ☐ + ☐ > ☐ 100 ☐

b ☐ 29 ☐ + ☐ < ☐ 100 ☐

c ☐ 85 ☐ + ☐ > ☐ 100 ☐

d ☐ 85 ☐ + ☐ < ☐ 100 ☐

....

Skills	Not yet	Kind of	Got it
• Recognises that equals sign means equivalence			
• Recognises the greater than and less than symbol			

Series E – Addition and Subtraction – Student Progress Record

Name_____ Class_____ Date _____

What went well: _____

_____

_____

_____

What I need to improve: _____

_____

_____

_____

--✁------

Series E – Addition and Subtraction – Student Progress Record

Name_____ Class_____ Date _____

What went well: _____

_____

_____

_____

What I need to improve: _____

_____

_____

_____

Series E – Addition and Subtraction

ASSESSMENT ANSWERS

Pages 10–12

1

80	20	30	20
50	38	15	60
50	45	55	40
30	70	10	90

2

+	12	15	14	8
64	76	79	78	72
15	27	30	29	23
82	94	97	96	90

3a 162
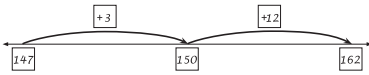
b 251
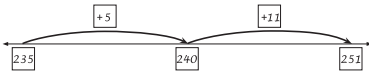
4a 141
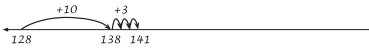
b 182
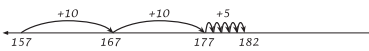
5a 68 + 35 = (6 tens + 3 tens) + (8 ones + 5 ones)

= 9 tens + 13 ones

= 103

b 86 + 56 ⟨ 50 / 6 → 86 + 50 = 136 → 136 + 6 = 142

6a 55 + 39 = 94

55 + 40 (−1)

95 (−1) = 94

b 46 + 28 = 74

46 + 30 (−2)

76 (−2) = 74

7a 75 km + 48 km = 123 km

b 73 + 48 = 121

Pages 13–15

1a 38 + 25 = 63

63 − 38 = 25

63 − 25 = 38

b 72 + 18 = 90

90 − 72 = 18

90 − 18 = 72

c 36 + 13 = 49

49 − 36 = 13

49 − 13 = 36

2a

b
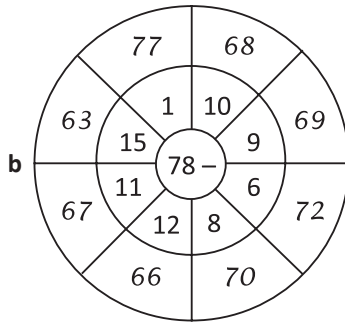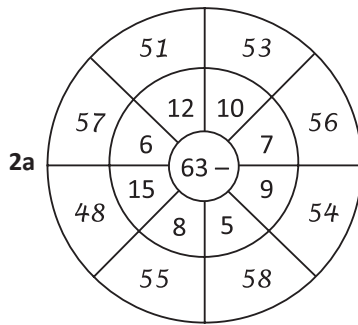
3a 79
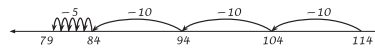
4a 176 − 153 ⟨ 100 / 50 / 3
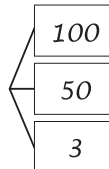
176 − 100 = 76

76 − 50 = 26

26 − 3 = 23

So, 176 − 153 = 23

4b 236 − 125 ⟨ 100 / 20 / 5
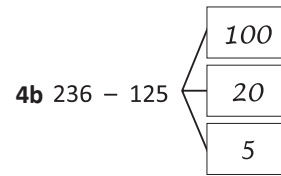
236 − 100 = 136

136 − 20 = 116

116 − 5 = 111

So, 236 − 125 = 111

5a 155 − 31 = 124

155 − 30 (−1)

125 (−1) = 124

b 266 − 29 = 237

266 − 30 (+ 1)

236 (+ 1) = 237

6a e: 100

46 + 52 = 98

98 − 52 = 46

b e: 50

87 − 39 = 48

48 + 39 = 87

c e: 120

263 − 141 = 122

122 + 141 = 263

d e: 290

172 + 119 = 291

291 − 119 = 172

Series E – Addition and Subtraction

Pages 13–15

7a 36 + 57 = 93

94 – 93 = 1

City have scored one more goal than United.

b £153 + £65 = £218

£250 – £218 = £32

Sarah needs to save £32 more.

Pages 16–17

e: 530

1a

	Th	H	T	O
		1	3	8
+		3	8	9
		5	2	7
	□		1	1

e: 520

b

	Th	H	T	O
		2	5	4
+		2	6	8
		5	2	2
	□		1	1

e: 1060

c

	Th	H	T	O
		2	9	1
+		7	6	7
	1	0	5	8
	1	1	□	

e: 5420

d

	Th	H	T	O
		4	7	6	2
+		6	5	7
		5	4	1	9
	1	1	□	

e: 760

1e

	Th	H	T	O
	5	8	5	8
+	3	8	9	9
	9	7	5	7
	1	1	1	

e: 13580

f

	Th	H	T	O
	3	8	0	8
+	9	7	7	1
1	3	5	7	9
	1	1	□	□

e: 120

2a

	H	T	O
	4	^{3}4̸	^{1}4
–	3	1	6
	1	2	8

e: 410

b

	H	T	O
	7	^{3}4̸	^{1}3
–	3	2	9
	4	1	4

e: 340

c

	H	T	O
	4	^{5}6̸	^{1}1
–	1	1	9
	3	4	2

e: 1270

2d

	Th	H	T	O
	1	^{4}5̸	^{14}7̸	^{1}2
–		2	7	8
	1	2	7	4

e: 1150

e

	Th	H	T	O
	3	^{2}3̸	^{13}4̸	^{1}2
–		2	1	8	9
	1	1	5	3

e: 2060

f

	Th	H	T	O
	6	^{4}5̸	^{10}1̸	^{1}3
–		4	4	4	7
	2	0	6	6

3

	H	T	O
	6	^{6}7̸	^{1}3
–		4	5	8
	2	1	5

Pages 18–19

1a, b Answers will vary.

2a £50 – £26.50 = £23.50; £23.50

b £100 – £67.80 = £32.20; £32.20

Series E – Addition and Subtraction

1a

IN	RULE: − 67	OUT
78		11
90		23
100		33

b

IN	RULE: +58	OUT
76		134
25		83
31		89
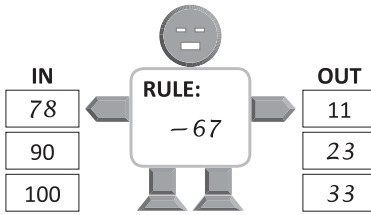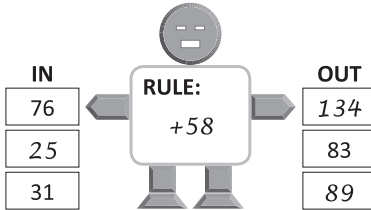
2a 14; 21; 42; 49; 56

b 81; 63; 45; 27; 18

3a

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

(No)

b 54 is not in the 4 times table.

4a 42; 21;

Rule: − 7

b 48; 54; 60;

Rule: + 6

5a

45	47	49	51
55	57	59	61
65	67	69	71
75	77	79	81

b

25	34	43	52
32	41	50	59
39	48	57	66
46	55	64	73

6a 70;

30 + 70 = 100

6b 28;

72 + 28 = 100

7 Answers will vary.

a (75+)

b (0 to 70)

c (15+)

d (0 to 14)

Series E – Addition and Subtraction

Topic	Reference	Strand	Substrand	Objective
Mental Strategies	5C1	Number	Calculation	Add and subtract numbers mentally with increasingly large numbers.
Written Methods	4C2	Number	Calculation	Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.
Written Methods	4C3	Number	Calculation	Estimate and use inverse operations to check answers to a calculation.
Written Methods	4C4	Number	Calculation	Solve addition and subtraction 2-step problems in contexts, deciding which operations and methods to use and why.
Money	4M1	Measurement	-	Compare different measures, including money in pounds and pence.
Money	4M2	Measurement	-	Estimate different measures, including money in pounds and pence.
Money	4M9	Measurement	-	Calculate different measures, including money in pounds and pence.
Money	4F10b	Number	Fractions (including decimals)	Solve simple measure and money problems involving fractions and decimals to two decimal places.
Patterns and Algebra	4C4	Number	Calculation	Solve addition and subtraction 2-step problems in contexts, deciding which operations and methods to use and why.