Question	Answer
1	a) 242 Take 3 ones away from the 5 ones of 245 b) 237 Change 1 ten of 245 to 10 ones to make 15 ones, then take 8 ones away.
2	304
3	a) 273 – 2 ☐ 273 – 5 ✓ 273 – 8 ✓ b) 395 – 8 ✓ 395 – 1 ☐ 395 – 5 ☐ c) 412 – 7 ✓ 412 – 6 ✓ 412 – 3 ✓
4	a) 127 b) 415 c) 243
5	217
6	a) 308 b) 653 c) 468 d) 668 e) 822 f) 818
7	a) 524 – 3 = 521 524 – 5 = 519 524 – 7 = 517 b) 188 – 5 = 183 183 – 5 = 178 180 – 5 = 175
8	a) Dexter b) Mo has subtracted 2 from 9
9	multiple possible solutions: 360 – 3 = 357 364 – 7 = 357 361 – 4 = 357 365 – 8 = 357 362 – 5 = 357 366 – 9 = 357 363 – 6 = 357
10	a) 3 b) 3 c) 7 d) 290

Question	Answer
1	164
2	a) 463 b) 463 – 40 c) 423
3	a) 285 b) 463 c) 180
4	a) 176 b) 116 c) 146
5	a) 772 b) 712 c) 792 d) 722 e) 762 f) 702
6	a) $717 + 30 = 747$ $\quad\quad$ $717 + 60 = 777$ $717 + 40 = 757$ $\quad\quad$ $80 + 717 = 797$ The ones digit is always 7 b) $182 – 30 = 152$ $\quad\quad$ $282 – 30 = 252$ $587 – 30 = 557$ $\quad\quad$ $380 – 30 = 350$ The ones digit stays the same as in the 3-digit number.
7	5 has been subtracted from the ones digit instead of the tens digit.
8	a) 166 b) 281 c) 501 d) 775 e) 987 f) 295 g) 847 h) 70 i) 90 j) 227 k) 40 l) 0
9	multiple possible answers, e.g.: $726 + 10 – 10 = 726$ $\quad\quad$ $726 + 20 – 10 = 736$ $716 + 40 – 30 = 726$ $\quad\quad$ $726 + 90 – 20 = 796$ $756 + 40 – 70 = 726$ $\quad\quad$ $726 + 70 – 90 = 706$

Question	Answer
1	a) 271 b) 281 c) 291 d) 301 When the two tens digits sum to less than 10 the hundreds digit stays the same. Then they sum to 10 or more the hundreds digit increases by 1
2	a) 412 b) 642
3	439
4	multiple possible answers, e.g.: 262 + 50 = 312 887 + 50 = 927 450 + 50 = 500
5	a) 522 b) 752 c) 427 d) 154 e) 814 f) 802 g) 241 h) 336
6	349 + 80 = 429 359 + 70 = 429 339 + 90 = 429 30 + 399 = 429

7	a) 772 + 40 = 812
	   772 + 50 = 822
	   772 + 80 = 852
	b) 394 + 60 = 454
	   384 + 60 = 444
	   354 + 60 = 414

8	a) 5 b) 6 c) 5
9	multiple possible answers, e.g.: 80 litres and 10 litres 70 litres and 20 litres 60 litres and 30 litres 50 litres and 40 litres (assuming that red bucket is larger than blue bucket)

Question	Answer
1	a) 215 b) 205 c) Create 235 with 2 hundreds, 3 tens and 5 ones. Change one of the hundreds into 10 tens. Take 5 tens away from the 13 tens. d) 235 – 50 = 185 235 – 70 = 165 235 – 90 = 145
2	a) 263 b) 672
3	Rosie can exchange 1 hundred for 10 tens and then subtract 70
4	a) 660 b) 298 c) 188 d) 887 e) 666 f) 438 g) 299 h) 623
5	408 – 50 = 358 418 – 60 = 358 428 – 70 = 358 438 – 80 = 358 448 – 90 = 358
6	Nijah might have subtracted 2 tens from 8 tens instead of 8 tens from 2 tens.
7	a) 50 b) 80 c) 60 d) 30 e) 90 f) 421 g) 673 h) 518
8	Amir's number must have between 2 and 6 tens. It must have 2 or more tens for no exchange when subtracting 20 It must have 6 or fewer tens for an exchange when subtracting 70

Reasoning 1

Modelled DAB Reasoning Responses

D – Millie has used partitioning in the best way.

A – It will be more efficient to subtract 3, then 5, than 4 and 4.

B – Using Alfie's method, you still need to cross the tens. 643 – 4 = 639 and 639 – 4 = 635. Using Millie's method, you can go to the nearest ten and use your knowledge of number bonds to work out 643 – 3 = 640 and 640 – 5 = 635.

Reasoning 2

Modelled DAB Reasoning Response

D – I agree with Jerry.

A – 459 – 8 is easier to work out than 306 – 8.

B – To calculate 459 – 8, we do not need to cross tens. 459 – 8 = 451.

To calculate 306 – 8, we need to partition and cross tens. 306 – 6 = 300 and 300 – 2 = 298.

Reasoning 3

Modelled DAB Reasoning Response

D – There is an odd one out.

A – 239 – 7 is the odd one out.

B – 451 – 3 and 546 – 8 both cross the tens. 239 – 7 does not.

Reasoning 4

Modelled DAB Reasoning Response

D – Sometimes

A – Only the ones column changes when we subtract ones, if you do not need to cross tens. The tens column changes as well if you cross tens.

B – 658 – 4 = 654 and only the ones column changes.

658 – 9 = 649 and the ones and tens column change.

Problem Solving 1

391 – **6** = 385

Problem Solving 2

There are many possible examples. Answers may include,

104 – 9 = 95

114 – 9 = 105

124 – 9 = 115

134 – 9 = 125

144 – 9 = 135

etc.

Reasoning 1

Modelled DAB Reasoning Responses

D – Alfie is using the correct fact.

A – The children need to take 5 tens from 7 tens, not 5 tens from 6 tens.

B – Millie is looking at the ones column in the first number and the tens column in the second. She should only be using the tens column like Alfie.
7 – 5 = 2 so 70 – 50 = 20 therefore 376 – 50 = 326.

Reasoning 2

Modelled DAB Reasoning Response

D – False

A – 167 – 30 does not equal 137 + 60.

B – 167 – 30 = 137 and 137 + 60 = 197 therefore 167 – 30 < 137 + 60.

Reasoning 3

Modelled DAB Reasoning Response

D – I do not agree with Anita.

A – The tens digit will not decrease by 1 each time.

B – The tens digit will increase by 1 each time because each calculation is subtracting 1 less ten. 197 – 90 = 107, 197 – 80 = 117 and 197 – 70 = 127.

Reasoning 4

Modelled DAB Reasoning Response

D – There is an odd one out.

A – 261 + 40 is the odd one out.

B – 261 + 20 and 251 + 30 both equal 281. 261 + 40 = 301.

Problem Solving 1

There are various possible answers:

501 + 30   511 + 20   521 + 10

297 – 10