Reasoning and Problem Solving
Add Two 4-Digit Numbers 2

Developing

1a. 2,124 + 1,026 = 3,150 (A and B)

2a. Any number between 5 and 9.

3a. He is correct. An exchange will take place when a 2-digit number is created, so 5 + 6 = 11 needs an exchange.

Expected

4a. 2,420 + 1,611 = 4,031 (C and B)

5a. Pupils must recognise there will be 1 from the previous exchange, so the numbers could be 4 and 0; 3 and 1; 2 and 2.

6a. She is incorrect. The exchange takes place from the ones to the tens (9 + 1 = 10).

Greater Depth

7a. 3,641 + 4,456 = 8,097

8a. Pupils must recognise that the two numbers will need to make 15. Various answers, for example: 9 and 6; 8 and 7.

9a. She is incorrect. The exchange takes place from the hundreds to the thousands (700 + 300 = 1,000).

Reasoning and Problem Solving
Add Two 4-Digit Numbers 2

Developing

1b. 1,107 + 2,114 = 3,221 (A and C)

2b. Any number between 4 and 9.

3b. He is incorrect. An exchange will take place when a 2-digit number is created, so 5 + 2 = 7 does not need an exchange.

Expected

4b. 2,007 + 3213 = 5,220 (A and B)

5b. Pupils must recognise they will need to make 14 in order for there to be an exchange, so the answers could be 9 and 5; 8 and 6; 7 and 7.

6b. She is correct. An exchange will take place because 300 + 800 = 1,100.

Greater Depth

7b. 4,612 + 3,821 = 8,433

8b. Pupils must recognise there will be a 1 from the exchange, so the numbers could be 6 and 0; 5 and 1; 4 and 2; 3 and 3.

9b. He is incorrect. The exchange takes place from the tens to the hundreds (60 + 40 = 100)