

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. $2,007 + 3,213 = 5,220$ (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 ($60 + 40 = 100$).