

## Reasoning and Problem Solving

### Order of Operations

#### Developing

1a.  $2 \times 4 \times 5 = 40$ ;  $4 \times 5 + 2 = 22$ .

2a. Chuan is incorrect, the answer is 5. He should have completed the division first.

$6 \div 2 = 3$ , then  $2 + 3 = 5$ .

3a. Kelly is correct. The multiplication should be completed before the addition.

#### Expected

4a.  $10 \times 5 \times 3 = 150$ ;  $(10 + 5) \times 3 = 45$ .

5a. Cian is incorrect, the answer is 39. He should have completed the division first.

$27 \div 9 = 3$ , then  $12 \times 3 = 36$  and then  $3 + 36 = 39$ .

6a. A – Steph, B – Chuan

#### Greater Depth

7a.  $12 \times 10 + 3 + 2 = 125$ ;  $12 \times 10 \div 2 + 3 = 63$ .

8a. Josh is incorrect, the answer is 129. He should have completed  $3^2 = 9$  first, then  $12 \times 10 = 120$  and then added the answers together.

9a. A – Sinead, B – Hafsa

## Reasoning and Problem Solving

### Order of Operations

#### Developing

1b.  $3 \times 5 \times 2 = 30$ ;  $5 \times 2 + 3 = 13$ .

2b. Alice is incorrect, the answer is 7. She should have completed the division first.

$2 \div 2 = 1$ , then  $8 - 1 = 7$ .

3b. Hafsa is correct. The multiplication should be completed before the subtraction.

#### Expected

4b.  $12 \times (4 + 3) = 84$ ;  $12 \times 4 \times 3 = 144$ .

5b. Lucy is correct. She completed the division first, then the multiplication, then added the answers together.

6b. A – Isabel, B – Alice

#### Greater Depth

7b.  $(6 \times 10) + (8 \times 4) = 92$  or  $(6 + 4) \times 10 - 8 = 92$ ;  $(6 + 4) \times 10 + 8$

8b. Ben is correct. He completed the indices first, then the division and multiplication, then the addition.

9b. A – Johnny, B – Gabriel