

## Reasoning and Problem Solving

### Calculating Ratio

#### Developing

- 1a. 4 get blue, 12 get yellow. There are 4 balloons left over (1 blue, 3 yellow).  
2a. No because she needs 1 more onion.  
3a. 40 bottles of water. 30:20 (accept 3:2) is the new ratio.

#### Expected

- 4a. 50 pizzas altogether, 30 ham pizzas.  
5a. No because there are 1 too many red flowers (or not enough yellow flowers).  
6a. 8:12 (accept 2:3), 20 pupils (8 boys, 12 girls).

#### Greater Depth

- 7a. 1:4:2, 8 shirts, 2 ties and 4 suits.  
8a. No there are 1 too many sodas.  
9a. 4:3:2, 36 animals (16 geese, 12 sheep, 8 goats).

## Reasoning and Problem Solving

### Calculating Ratio

#### Developing

- 1b. 9 choose stripy, 9 choose spotty. There are 12 hats left over (11 stripy, 1 spotty).  
2b. No because there are 1 too many pencils.  
3b. 8 footballs. 8:14 (accept 4:7) is the new ratio.

#### Expected

- 4b. 75 bottles altogether, 15 water bottles.  
5b. No because there are 2 too many jars of marmalade (or not enough jam).  
6b. 8:16 (accept 1:2), 24 animals (8 cats and 16 dogs).

#### Greater Depth

- 7b. 2:4:3, 6 coffee orders, 12 orange juice orders.  
8b. No because there are 1 too many reds and 1 too few greens.  
9b. 1:3:1, 30 boys altogether (6 three years, 18 two years, 6 four years).