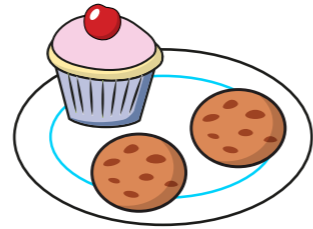# Calculating ratio

1 Eva is baking cakes and cookies.

For every 1 cake, she will bake 2 cookies.

a) If Eva bakes 3 cakes, how many cookies will she bake?

$\boxed{6}$

b) If Eva bakes 10 cookies, how many cakes will she bake?

$\boxed{5}$

2 The ratio of red to yellow counters is 2 : 3

There are 20 counters in total.

How many counters of each colour are there?

You can colour the counters to help you.

yellow $\boxed{12}$ red $\boxed{8}$

3 Tom has 5 green cubes for every 3 yellow cubes.

He has 16 cubes in total.

Draw a diagram to represent this.

4 Esther is building a tower of cubes.

The ratio of red to yellow cubes is 3 : 1

The tower has 6 yellow cubes. How many red cubes are there?

$\boxed{18}$

5 Nijah plays 21 games of chess.

For every 2 games she wins, she loses 5 games.

How many more games does she lose than win?

Win | 3 | 3 | ?

Lose | 3 | 3 | 3 | 3 | 3 | } 21

$21 \div 7 = 3$

$3 \times 3 = 9$

$\boxed{9}$

6 a) Huan is making a drink by mixing 1 part juice with 5 parts water.

Complete the table to show the amounts he would need to use.

Juice	Water
1 litre	5 litres
2 litres	10 litres
4 litres	20 litres
100 ml	500 ml
200 ml	1 litre
300 ml	1·5 litres
6 litres	30 litres
150 ml	750 ml

1 L = 1,000 ml

b) Huan makes 1 litre 500 ml of drink in total.
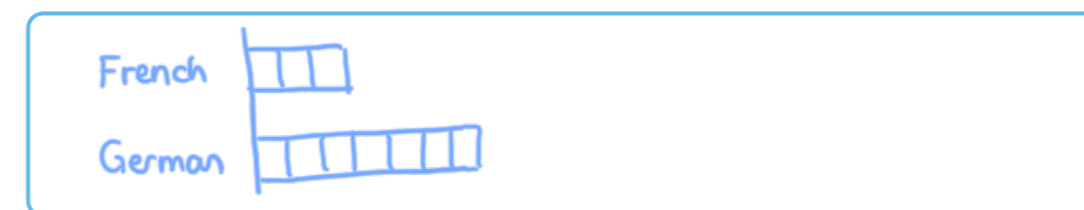
How much juice and water does he need to use?

juice 250 ml   water 1,250 ml

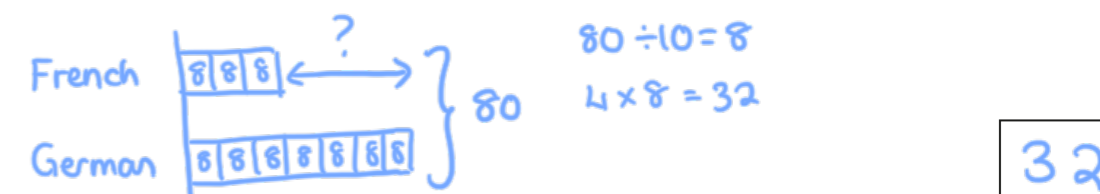**7** A group of students study French or German in the ratio 3 : 7

a) Which subject has the most students? ___German___
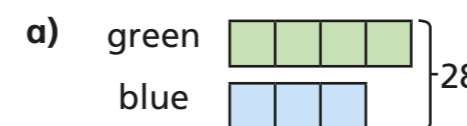
b) Draw a diagram to represent this.

French
German

c) There are 80 students in total.

How many more students study German than French?

French German

80 ÷ 10 = 8
4 × 8 = 32

80

32

8 Describe a situation for each bar model.

a) green
blue   28

The ratio of green to blue sweets is 4 : 3. There are 28 sweets in total.

b)   28
green
blue
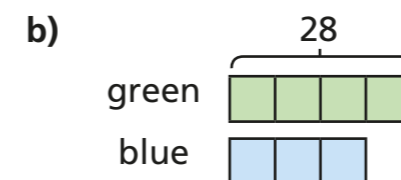
The ratio of green to blue sweets is 4 : 3. There are 28 green sweets.
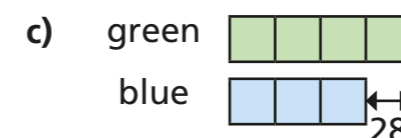
c) green
blue   28

The ratio of green to blue sweets is 4 : 3. There are 28 more green sweets than blue sweets.

Compare answers with a partner.

What is the same and what is different?