Calculating ratio

1 Eva is baking cakes and cookies.

For every 1 cake, she will bake 2 cookies.

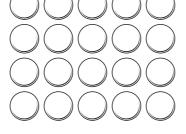**a)** If Eva bakes 3 cakes, how many cookies will she bake?

b) If Eva bakes 10 cookies, how many cakes will she bake?
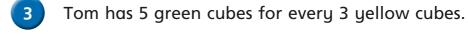
2 The ratio of red to yellow counters is 2 : 3

There are 20 counters in total.

How many counters of each colour are there?

You can colour the counters to help you.

yellow [ ]   red [ ]

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?

5 Nijah plays 21 games of chess.

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

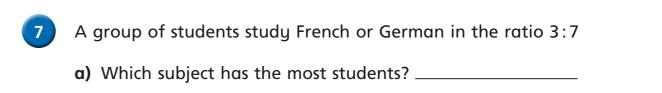How many more games does she lose than win?

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	
4 litres	
100 ml	
200 ml	
300 ml	
	30 litres
	750 ml

b) Huan makes 1 litre 500 ml of drink in total.

How much juice and water does he need to use?

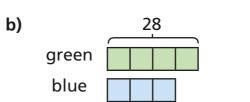juice [ ]   water [ ]

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

a) Which subject has the most students? _____

b) Draw a diagram to represent this.

c) There are 80 students in total.

How many more students study German than French?

[ ]

8 Describe a situation for each bar model.

a) green [ ][ ][ ][ ] } 28   _____
blue [ ][ ][ ]   _____

b)   28
green [ ][ ][ ][ ]   _____
blue [ ][ ][ ]   _____

c) green [ ][ ][ ][ ]   _____
blue [ ][ ][ ] ↔ 28   _____

Compare answers with a partner.

What is the same and what is different?