Ratio and fractions

1 Here are some counters.

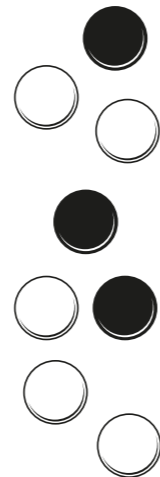Complete the sentences to describe the counters.

a) There are [8] counters altogether.

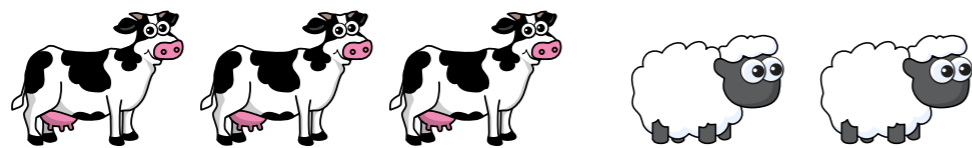**b)** There are [5] white counters.

c) There are [3] black counters.

d) 3 out of the 8 counters are _black_

e) [5] out of the 8 counters are white.

2 Here are some animals.

Complete the sentences.

For every [3] cows there are [2] sheep.

The ratio of cows to sheep is [3] to [2]

[$\frac{3}{5}$] of the animals are cows.

[$\frac{2}{5}$] of the animals are sheep.

3 Part of the bar has been shaded.

a) What fraction of the bar is shaded? [$\frac{5}{6}$]

b) What fraction of the bar is not shaded? [$\frac{1}{6}$]

c) Write the ratio of shaded to non-shaded parts. [5] to [1]

d) Write the ratio of non-shaded to shaded parts. [1] to [5]

4 Here are some shapes.

a) What fraction of the shapes are circles? [$\frac{4}{10}$]

b) What fraction of the shapes are stars? [$\frac{6}{10}$]

c) What is the ratio of stars to circles? [6] to [4]

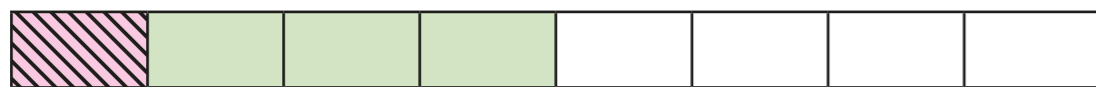**d)** What is the ratio of circles to stars? [4] to [6]

Can you find a different answer to each of these questions?

Compare with a partner.
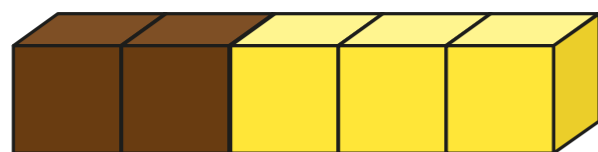
5 The bar model shows the ratio 1 to 3 to 4

Talk to a partner about how it shows this.

a) What fraction of the bar is striped? $\frac{1}{8}$

b) What fraction of the bar is fully shaded? $\frac{3}{8}$

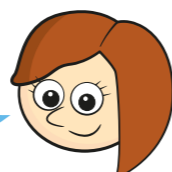c) What fraction of the bar is blank? $\frac{4}{8}$

6

Jack: The fraction of brown cubes is $\frac{2}{3}$ because the ratio of brown to yellow is 2 to 3

Rosie: The fraction of brown cubes is $\frac{2}{5}$

Who is correct? _Rosie_

Explain your answer.

There are 5 cubes in total and 2 of them are brown.

7 Scott draws a rectangle and divides it into 8 equal parts.

He shades 25% of the bar.

What is the ratio of shaded to non-shaded parts?   2 to 6

8 A pencil case contains felt tips and pencils.

$\frac{3}{8}$ of the contents are pencils.

What is the ratio of felt tips to pencils?   5 to 3

9 Ron has some limes and strawberries.

The ratio of strawberries to limes is 5 to 1

a) How do you know he has more strawberries than limes?

He has 5 strawberries for every 1 lime.

b) What fraction of the fruits are strawberries? $\frac{5}{6}$

c) What fraction of the fruits are limes? $\frac{1}{6}$