Ratio and fractions

1 Here are some counters.

Complete the sentences to describe the counters.

a) There are $\boxed{8}$ counters altogether.

b) There are $\boxed{5}$ white counters.

c) There are $\boxed{3}$ black counters.

d) 3 out of the 8 counters are __black__

e) $\boxed{5}$ out of the 8 counters are white.

2 Here are some animals.
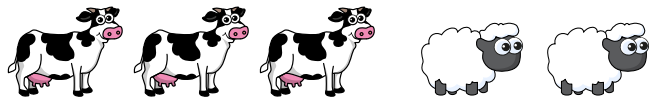
Complete the sentences.

For every $\boxed{3}$ cows there are $\boxed{2}$ sheep.

The ratio of cows to sheep is $\boxed{3}$ to $\boxed{2}$

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

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

3 Part of the bar has been shaded.

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

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

c) Write the ratio of shaded to non-shaded parts. $\boxed{5}$ to $\boxed{1}$

d) Write the ratio of non-shaded to shaded parts. $\boxed{1}$ to $\boxed{5}$

4 Here are some shapes.

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

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

c) What is the ratio of stars to circles? $\boxed{6}$ to $\boxed{4}$

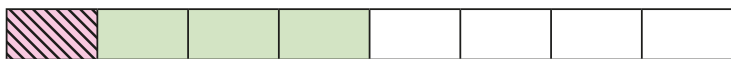**d)** What is the ratio of circles to stars? $\boxed{4}$ to $\boxed{6}$

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.

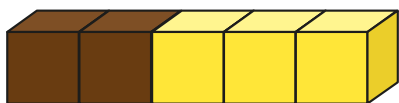**a)** What fraction of the bar is striped? $\frac{1}{8}$

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.

2 out of 5 cubes are brown.

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

He shades 25% of the bar.

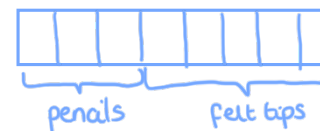What is the ratio of shaded to non-shaded parts? 2 to 6

(or 1 to 3)

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

pencils   felt tips

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?

For every 1 lime there are 5 strawberries.

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

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