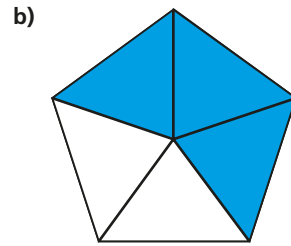# Represent any fraction as a diagram
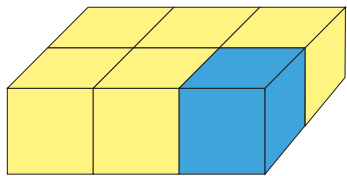
1 What fraction of the shapes is shaded?

a)

b)

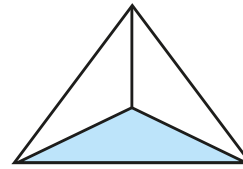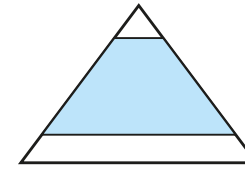**2** What fraction of the shapes are shaded?
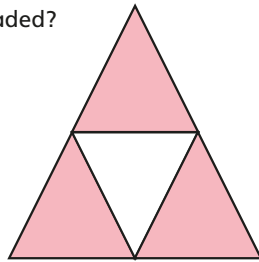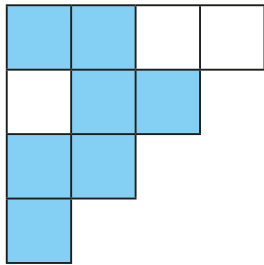
3

What fraction of the cubes are yellow?

4 One of these triangles has $\frac{1}{3}$ shaded.
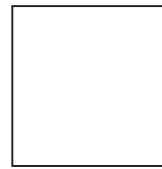
A   **B**

a) Which shape has $\frac{1}{3}$ shaded?

b) Explain why one shape has $\frac{1}{3}$ shaded and the other does not.

5 Shade the stated fractions of the squares.

$\frac{1}{2}$ shaded $\frac{1}{4}$ shaded $\frac{1}{8}$ shaded

6 Alex and Dexter are dividing rectangles into quarters.

They can only join up dots.

I divided my shape into quarters and I made 4 identical shapes.

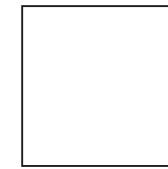**4** One of these triangles has $\frac{1}{3}$ shaded.

A   B

a) Which shape has $\frac{1}{3}$ shaded?

b) Explain why one shape has $\frac{1}{3}$ shaded and the other does not.
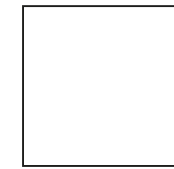
5 Shade the stated fractions of the squares.
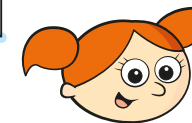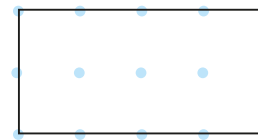
$\frac{1}{2}$ shaded $\frac{1}{4}$ shaded $\frac{1}{8}$ shaded

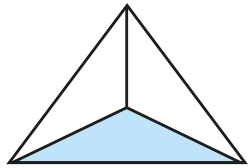**6** Alex and Dexter are dividing rectangles into quarters.

They can only join up dots.
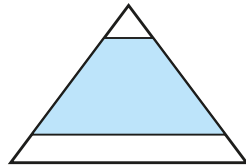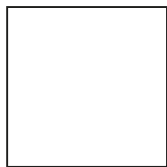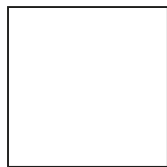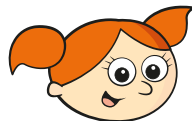
I divided my shape into quarters and I made 4 identical shapes.

a) How might Alex have divided her shape?

Show two different ways.

All 4 of my shapes are different, but they are still quarters.

b) How might Dexter have divided his shape?

Show two different ways.

Compare answers with a partner.

Can you find more ways to divide the shapes?

7 a) What fraction of the shapes are shaded?
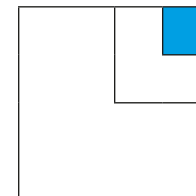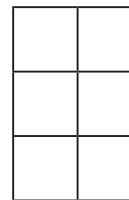
b) Did you have to make any assumptions?

Discuss with a partner.

8 All the sides of this shape are the same length.

a) Divide the shape into fifths.

b) Shade $\frac{3}{4}$ of the shape.

c) Shade 10% of the shape.

d) Shade 0.375 of the shape.