Name: .... Class: ....

Decompose fractions in multiple ways

a. Write $\frac{6}{7}$ as a sum of fractions in 3 different ways.

b. Given the fractions below, pick and write $\frac{9}{3}$ as a sum of fractions in 2 different ways.

$$\frac{1}{3} \quad \frac{2}{3} \quad \frac{3}{3} \quad \frac{4}{3} \quad \frac{5}{3} \quad \frac{6}{3} \quad \frac{7}{3}$$

c. Given the fractions bellow, pick and write $\frac{7}{8}$ as a sum of fractions in 2 different ways.

$$\frac{2}{8} \quad \frac{3}{8} \quad \frac{4}{8} \quad \frac{5}{8} \quad \frac{6}{8}$$

d. Write $\frac{2}{8}$ as a sum of fractions in 3 different ways.

e. Write $\frac{3}{9}$ as a sum of fractions in 2 different ways.

f. Write $\frac{5}{9}$ as a sum of fractions in 3 different ways.

g. Given the fractions bellow, pick and write $\frac{7}{9}$ as a sum of fractions in 2 different ways.

$$\frac{2}{9} \quad \frac{3}{9} \quad \frac{4}{9} \quad \frac{5}{9} \quad \frac{6}{9}$$

h. Write $\frac{7}{9}$ as a sum of fractions in 2 different ways.

Name: .... Class: ....

Decompose fractions in multiple ways

a. Write $\frac{6}{7}$ as a sum of fractions in 3 different ways.

Let's first of all start by breaking the fraction into unit fractions to decompose it.

$\frac{1}{7}$ $\frac{1}{7}$ $\frac{1}{7}$ $\frac{1}{7}$ $\frac{1}{7}$ $\frac{1}{7}$

$\frac{1}{7}$ $\frac{2}{7}$ $\frac{3}{7}$ $\frac{4}{7}$ $\frac{5}{7}$ $\frac{6}{7}$ $\frac{7}{7}$

$\frac{2}{7}$ $\frac{2}{7}$ $\frac{2}{7}$

$\frac{1}{7}$ $\frac{2}{7}$ $\frac{3}{7}$ $\frac{4}{7}$ $\frac{5}{7}$ $\frac{6}{7}$ $\frac{7}{7}$

$\frac{4}{7}$ $\frac{2}{7}$

$\frac{1}{7}$ $\frac{2}{7}$ $\frac{3}{7}$ $\frac{4}{7}$ $\frac{5}{7}$ $\frac{6}{7}$ $\frac{7}{7}$
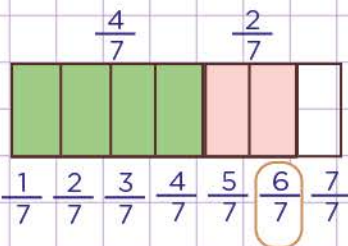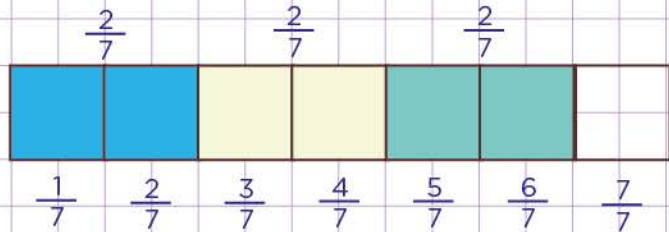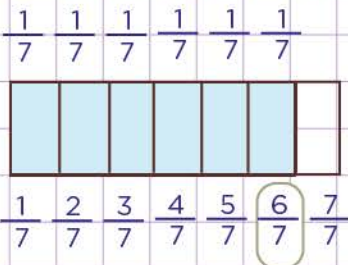
So the 3 different ways decomposing $\frac{6}{7}$ are:-

$$\frac{6}{7} = \frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7}$$

$$\frac{6}{7} = \frac{2}{7} + \frac{2}{7} + \frac{2}{7}$$

$$\frac{6}{7} = \frac{4}{7} + \frac{2}{7}$$

$\frac{9}{3}$

b. Given the fractions below, pick and write $\frac{9}{3}$ as a sum of fractions in 2 different ways.

$\frac{1}{3}$ $\frac{2}{3}$ $\frac{3}{3}$ $\frac{4}{3}$ $\frac{5}{3}$ $\frac{6}{3}$ $\frac{7}{3}$

$$\frac{9}{3} = \frac{1}{3} + \frac{3}{3} + \frac{5}{3}$$

$$\frac{9}{3} = \frac{2}{3} + \frac{7}{3}$$

c. Given the fractions bellow, pick and write $\frac{7}{8}$ as a sum of fractions in 2 different ways.

$\frac{2}{8}$ $\frac{3}{8}$ $\frac{4}{8}$ $\frac{5}{8}$ $\frac{6}{8}$

$$\frac{7}{8} = \frac{3}{8} + \frac{4}{8}$$

$$\frac{7}{8} = \frac{2}{8} + \frac{5}{8}$$