

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

$\frac{1}{3}$	$\frac{2}{3}$	$\frac{3}{3}$	$\frac{4}{3}$	$\frac{5}{3}$	$\frac{6}{3}$	$\frac{7}{3}$
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c. Given the fractions bellow, pick and write $\frac{7}{8}$ as a sum of fractions in 2 different ways.

$\frac{2}{8}$	$\frac{3}{8}$	$\frac{4}{8}$	$\frac{5}{8}$	$\frac{6}{8}$
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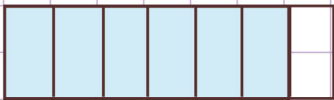
Decompose fractions in multiple ways



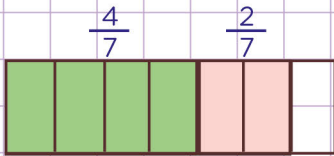
a. Write $\frac{6}{7}$ as a sum of fractions in 3 different ways.

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

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

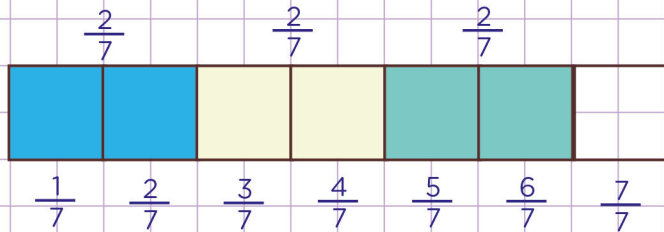


$$\frac{1}{7} + \frac{2}{7} + \frac{3}{7} + \frac{4}{7} + \frac{5}{7} + \frac{6}{7} + \frac{7}{7}$$



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

$$\frac{9}{3}$$



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

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

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

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

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

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

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

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

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

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

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

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

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