

Decompose fractions

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Use the explanations to discuss the idea. A worked answer is one example; equivalent answers may also be valid.

1. Write $\frac{9}{10}$ as a sum of two positive fractions with denominator 10.

$\frac{1}{10} + \frac{8}{10}$ (other positive sums with denominator 10 are valid)

One possible sum is $\frac{1}{10} + \frac{8}{10}$. Any two positive numerators totaling 9, each over 10, work; either order is valid.



2. Write $\frac{11}{12}$ as a sum of two positive fractions with denominator 12.

$\frac{1}{12} + \frac{10}{12}$ (other positive sums with denominator 12 are valid)

One possible sum is $\frac{1}{12} + \frac{10}{12}$. Any two positive numerators totaling 11, each over 12, work; either order is valid.



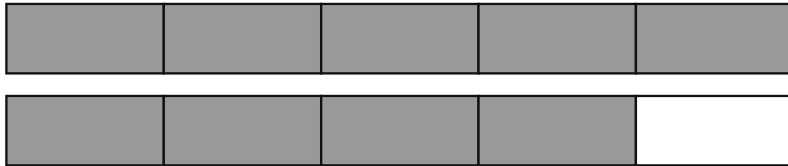
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3. Write $9/5$ as a sum of two positive fractions with denominator 5.

$1/5 + 8/5$ (other positive sums with denominator 5 are valid)

One possible sum is $1/5 + 8/5$. Any two positive numerators totaling 9, each over 5, work; either order is valid.



4. Write $182/100$ as a sum of two positive fractions with denominator 100.

$1/100 + 181/100$ (other positive sums with denominator 100 are valid)

One possible sum is $1/100 + 181/100$. Any two positive numerators totaling 182, each over 100, work; either order is valid.

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5. Write $\frac{3}{4}$ as a sum of two positive fractions with denominator 4.

$\frac{1}{4} + \frac{2}{4}$ (other positive sums with denominator 4 are valid)

One possible sum is $\frac{1}{4} + \frac{2}{4}$. Any two positive numerators totaling 3, each over 4, work; either order is valid.

6. Write $\frac{14}{6}$ as a sum of two positive fractions with denominator 6. Which reason would help you solve this correctly?

Split the 14 parts into two nonempty groups. Keep the denominator 6.

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7. Split a $\frac{6}{3}$ -meter ribbon into two positive lengths. Write both lengths with denominator 3.

$\frac{1}{3} + \frac{5}{3}$ (other positive sums with denominator 3 are valid)

One possible sum is $\frac{1}{3} + \frac{5}{3}$. Any two positive numerators totaling 6, each over 3, work; either order is valid.

8. Fill in the missing numerator: $\frac{1}{2} = \frac{?}{6}$.

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$\frac{1}{2} = (1 \times 3)/(2 \times 3) = \frac{3}{6}$. The whole and the shaded amount stay the same.

