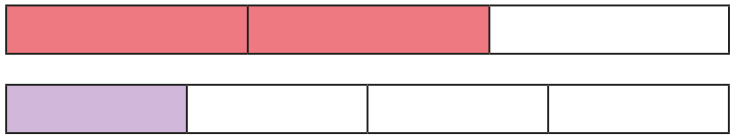
Add and subtract fractions (2)

1 Amir is using fraction strips to work out $\frac{2}{3} + \frac{1}{4}$



Amir says he needs to find a common denominator.

a) Complete Amir's method.

$\frac{2}{3} = \frac{\square}{12}$

$\frac{1}{4} = \frac{\square}{12}$

$\frac{2}{3} + \frac{1}{4} = \frac{\square}{12} + \frac{\square}{12} = \frac{\square}{12}$

b) Show the addition on the fraction strip.

c) Could you have used a different denominator?

2 What common denominator can you use to add the fractions?

a) $\frac{2}{5} + \frac{1}{2}$

b) $\frac{2}{3} + \frac{4}{5}$

c) $\frac{7}{8} - \frac{1}{4}$

d) $\frac{7}{9} - \frac{1}{6}$

e) $\frac{11}{15} + \frac{3}{10}$

3 Ron and Eva are working out $\frac{1}{4} + \frac{5}{6}$

Ron's method

$\frac{1}{4} + \frac{5}{6} = \frac{3}{12} + \frac{10}{12} = \frac{13}{12}$

Eva's method

$\frac{1}{4} + \frac{5}{6} = \frac{6}{24} + \frac{20}{24} = \frac{26}{24}$

a) What is the same about Ron's and Eva's methods?

b) What is different about their methods?

c) Which method do you prefer? Why?

4 Complete the calculations.

a) $\frac{1}{5} + \frac{3}{4}$

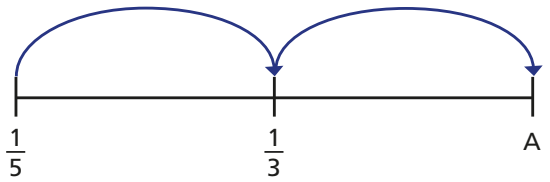
b) $\frac{7}{8} - \frac{1}{3}$

c) $\frac{1}{2} - \frac{1}{7}$

d) $\frac{11}{18} + \frac{7}{12}$

5 Mo is drawing jumps on a number line.

The jumps are the same size.



a) What is the size of the jump?

b) What is the value of A?

Add and subtract fractions (2)

3 Ron and Eva are working out $\frac{1}{4} + \frac{5}{6}$

Ron's method

$\frac{1}{4} + \frac{5}{6} = \frac{3}{12} + \frac{10}{12} = \frac{13}{12}$

Eva's method

$\frac{1}{4} + \frac{5}{6} = \frac{6}{24} + \frac{20}{24} = \frac{26}{24}$

a) What is the same about Ron's and Eva's methods?

b) What is different about their methods?

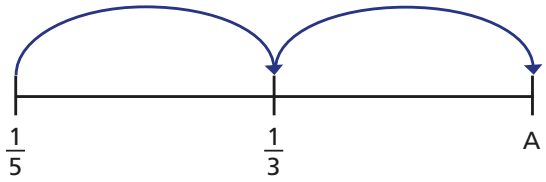
c) Which method do you prefer? Why?

4 Complete the calculations.

a) $\frac{1}{5} + \frac{3}{4}$ b) $\frac{7}{8} - \frac{1}{3}$ **c)** $\frac{1}{2} - \frac{1}{7}$ **d)** $\frac{11}{18} + \frac{7}{12}$

5 Mo is drawing jumps on a number line.

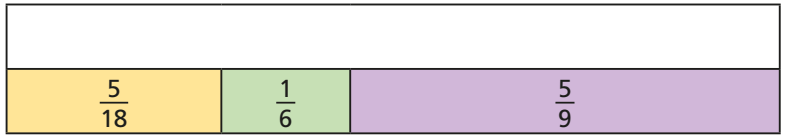
The jumps are the same size.



a) What is the size of the jump?

b) What is the value of A?

6 Complete the bar model.



7 Work out the additions.

Give your answers as mixed numbers and as improper fractions.

a) $\frac{4}{5} + \frac{5}{4}$ b) $\frac{2}{3} + \frac{3}{2}$ **c)** $\frac{9}{8} + \frac{8}{9}$ **d)** $\frac{5}{3} + \frac{3}{5}$

What patterns do you notice?

8 Look at these additions.

$\frac{1}{2} + \frac{1}{3} = \square$ $\frac{1}{2} + \frac{1}{3} + \frac{1}{4} = \square$ $\frac{1}{2} + \frac{1}{3} + \frac{1}{4} + \frac{1}{5} = \square$

a) When does this pattern first give an answer greater than 2?

b) Do you think the pattern will ever give an answer greater than 100?