



THIRD SPACE
LEARNING

Ready-to-go Lesson Slides

Year 3

Number: Fractions

Lesson 6

Sum1

At Third Space Learning we provide personalised online lessons from specialist maths tutors to support the target groups in your school.

These ready-to-go slides are designed to work alongside our interventions to supplement quality first teaching and raise attainment in maths for all pupils.

To find out more about how you could use our 1-to-1 interventions year-round to boost maths progress in your school then get in touch:

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Boosting maths progress through 1-to-1 conversations...

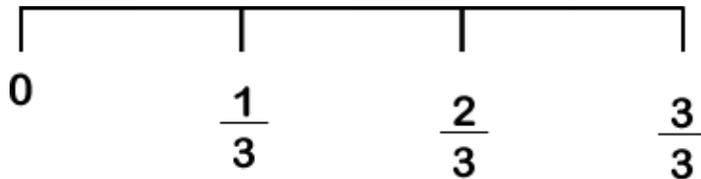


To add fractions with the same denominator

Starter:

Which one is different?

$$\frac{1}{3} \quad \frac{1}{5} \quad \frac{1}{6} \quad \frac{1}{8} \quad \frac{1}{12}$$



$$\frac{7}{12} \quad \frac{8}{12} \quad \frac{11}{12} \quad \frac{12}{12}$$

$$\frac{1}{4} \quad \frac{1}{6} \quad \frac{1}{7} \quad \frac{1}{9} \quad \frac{1}{11}$$

Success Criteria:

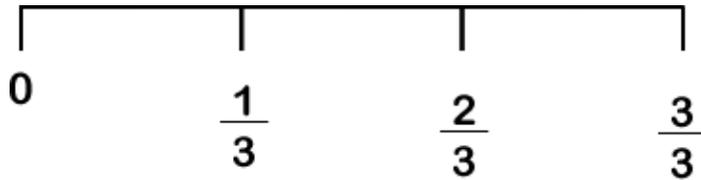
- I know that when adding fractions with the same denominator, the denominator does not change
- I can explain why denominators do not change in these calculations

To add fractions with the same denominator

Starter:

Which one is different?

$$\frac{1}{3} \quad \frac{1}{5} \quad \frac{1}{6} \quad \frac{1}{8} \quad \frac{1}{12}$$



$$\frac{7}{12} \quad \frac{8}{12} \quad \frac{11}{12} \quad \frac{12}{12}$$

$$\frac{1}{4} \quad \frac{1}{6} \quad \frac{1}{7} \quad \frac{1}{9} \quad \frac{1}{11}$$

Success Criteria:

- I can compare fractions using resources
- I know how to compare fractions by looking at numerators and denominators

The first set of fractions is the odd one out. All of the groups of fractions are in ascending order apart from this one, which is in descending order (greatest to smallest) instead.

To add fractions with the same denominator

Talking time:

Kieran takes a strip of paper.

He folds it into five equal pieces and colours some of them:



Complete the missing information:

- fifths of the strip is yellow.**
- fifth of the strip is green.**
- fifth of the strip is blue.**
- fifths of the strip is coloured in.**

Can you write this as a number sentence?

To add fractions with the same denominator

Talking time:

Kieran takes a strip of paper.

He folds it into five equal pieces and colours some of them:



Complete the missing information:

2 fifths of the strip is yellow.

1 fifth of the strip is green.

1 fifth of the strip is blue.

4 fifths of the strip is coloured in.

Can you write this as a number sentence?

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

To add fractions with the same denominator

Activity 1a:

Cut a circle out of paper.

Fold it in half, then half again, then half again.

Colour 3 segments in red, 2 segments in yellow and 1 segment in blue.

Complete the information about your circle and write a number sentence:

_____ **of the circle is red.**

_____ **of the circle is yellow.**

_____ **of the circle is blue.**

_____ **of the circle is coloured in.**

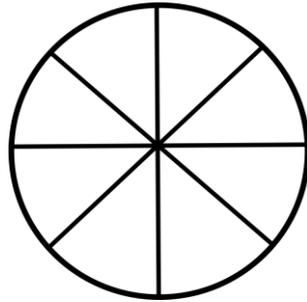
To add fractions with the same denominator

Activity 1a:

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Fold it in half, then half again, then half again.

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_____ of the circle is red.

_____ of the circle is yellow.

_____ of the circle is blue.

_____ of the circle is coloured in.

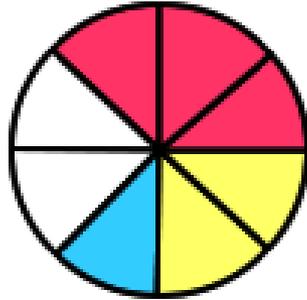
To add fractions with the same denominator

Activity 1a:

Cut a circle out of paper.

Fold it in half, then half again, then half again.

Colour 3 segments in red, 2 segments in yellow and 1 segment in blue.



Complete the information about your circle and write a number sentence:

Three eighths of the circle is red.

Two eighths of the circle is yellow.

One eighth of the circle is blue.

Six eighths of the circle is coloured in.

$$\frac{3}{8} + \frac{2}{8} + \frac{1}{8} = \frac{6}{8}$$

To add fractions with the same denominator

Activity 1b:

Look carefully at your answers to the Talking Time slide and Activity 1a.

$$\frac{2}{5} + \frac{1}{5} + \frac{1}{5} = \frac{4}{5} \qquad \frac{3}{8} + \frac{2}{8} + \frac{1}{8} = \frac{6}{8}$$

Can you explain how to add fractions when the denominators are the same?

To add fractions with the same denominator

Activity 1b:

Look carefully at your answers to the Talking Time slide and Activity 1a.

$$\frac{2}{5} + \frac{1}{5} + \frac{1}{5} = \frac{4}{5} \qquad \frac{3}{8} + \frac{2}{8} + \frac{1}{8} = \frac{6}{8}$$

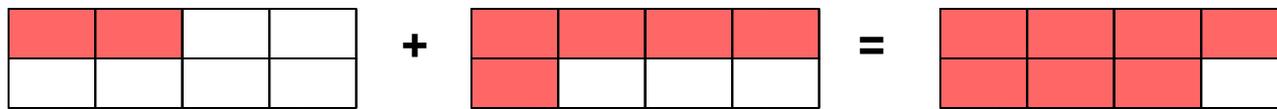
Can you explain how to add fractions when the denominators are the same?

When the denominators of fractions are the same, we can add the fractions by adding the numerators and keeping the fractions the same in the answer. So, in the first example above, the fractions are all fifths, so the answer will be a number of fifths too. The total of the numerators is 4, so the answer is four fifths.

To add fractions with the same denominator

Talking time:

Use this model to complete the addition:

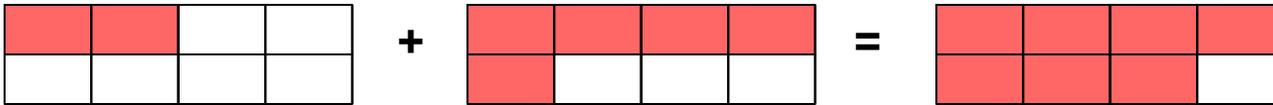


$$\frac{2}{8} + \frac{?}{8} = \frac{?}{?}$$

To add fractions with the same denominator

Talking time:

Use this model to complete the addition:



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

To add fractions with the same denominator

Activity 2:

Sketch models to solve these additions:

a) $\frac{1}{6} + \frac{3}{6} = \frac{?}{?}$

b) $\frac{1}{3} + \frac{1}{3} = \frac{?}{?}$

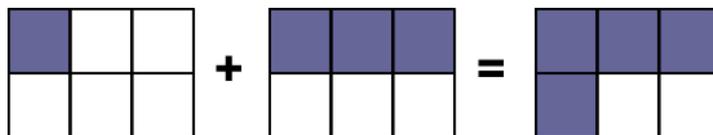
c) $\frac{6}{10} + \frac{3}{10} = \frac{?}{?}$

To add fractions with the same denominator

Activity 2:

Sketch models to solve these additions:

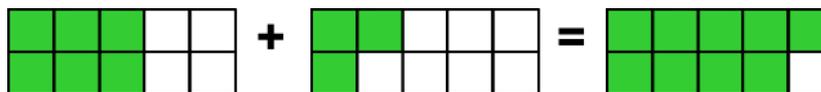
$$\text{a) } \frac{1}{6} + \frac{3}{6} = \frac{4}{6}$$



$$\text{b) } \frac{1}{3} + \frac{1}{3} = \frac{2}{3}$$



$$\text{c) } \frac{6}{10} + \frac{3}{10} = \frac{9}{10}$$



To add fractions with the same denominator

Talking time:

Chloe eats $\frac{4}{15}$ of a pizza.

Abdul eats $\frac{3}{15}$ of the same pizza.

How much of the pizza has been eaten altogether?

To add fractions with the same denominator

Talking time:

Chloe eats $\frac{4}{15}$ of a pizza.

Abdul eats $\frac{3}{15}$ of the same pizza.

How much of the pizza has been eaten altogether?

$$\frac{4}{15} + \frac{3}{15} = \frac{7}{15}$$

Seven fifteenths of the pizza has been eaten altogether.

To add fractions with the same denominator

Activity 3:

Swansborough Council are slowly filling in all the pot holes in the city's roads.

By the end of January, they had filled in two tenths of all the pot holes.

By the end of February, they had filled in a further three tenths.

During March, they repaired a further two tenths.

What fraction of all the city's pot holes had been filled in by the end of March?

To add fractions with the same denominator

Activity 3:

Swansborough Council are slowly filling in all the pot holes in the city's roads.

By the end of January, they had filled in two tenths of all the pot holes.

By the end of February, they had filled in a further three tenths.

During March, they repaired a further two tenths.

What fraction of all the city's pot holes had been filled in by the end of March?

$$\frac{2}{10} + \frac{3}{10} + \frac{2}{10} = \frac{7}{10}$$

Seven tenths of the pot holes were repaired by the end of March.

To add fractions with the same denominator

Activity 4:

A box of chocolates contains 15 chocolates.

Tilly and Oliver both eat an even number of chocolates each.

$\frac{1}{15}$ of the box is left.

Write the fractions that Tilly and Oliver could have eaten as an addition number sentence that shows the total fraction they ate.

To add fractions with the same denominator

Activity 4:

A box of chocolates contains 15 chocolates.

Tilly and Oliver both eat an even number of chocolates each.

$\frac{1}{15}$ of the box is left.

Write the fractions that Tilly and Oliver could have eaten as an addition number sentence that shows the total fraction they ate.

$$\frac{2}{15} + \frac{12}{15} = \frac{14}{15}$$

$$\frac{6}{15} + \frac{8}{15} = \frac{14}{15}$$

$$\frac{10}{15} + \frac{4}{15} = \frac{14}{15}$$

$$\frac{4}{15} + \frac{10}{15} = \frac{14}{15}$$

$$\frac{8}{15} + \frac{6}{15} = \frac{14}{15}$$

$$\frac{12}{15} + \frac{2}{15} = \frac{14}{15}$$

To add fractions with the same denominator

Evaluation:

True or False?

a) When we add two fractions with the same denominator, we add the numerators, then add the denominators.

b) $\frac{6}{16} + \frac{4}{16} = \frac{10}{16}$

c) $\frac{3}{10} + \frac{4}{10} = \frac{7}{20}$

d) Alfie is adding three fractions that are all a number of eighths. His answer will also be a number of eighths.

e) Two quarters plus two quarters equals four eighths.

Success Criteria:

- I can compare fractions using resources
- I know how to compare fractions by looking at numerators and denominators

To add fractions with the same denominator

Evaluation:

True or False?

a) When we add two fractions with the same denominator, we add the numerators, then add the denominators. **FALSE**

b) $\frac{6}{16} + \frac{4}{16} = \frac{10}{16}$ **TRUE**

c) $\frac{3}{10} + \frac{4}{10} = \frac{7}{20}$ **FALSE**

d) Alfie is adding three fractions that are all a number of eighths. His answer will also be a number of eighths. **TRUE**

e) Two quarters plus two quarters equals four eighths. **FALSE**

Success Criteria:

- I can compare fractions using resources
- I know how to compare fractions by looking at numerators and denominators

Do you have a group of pupils who need a boost in maths this term?

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- Plug any gaps or misconceptions
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