Maths

Fractions

Adding Fraction Multiples

Aim

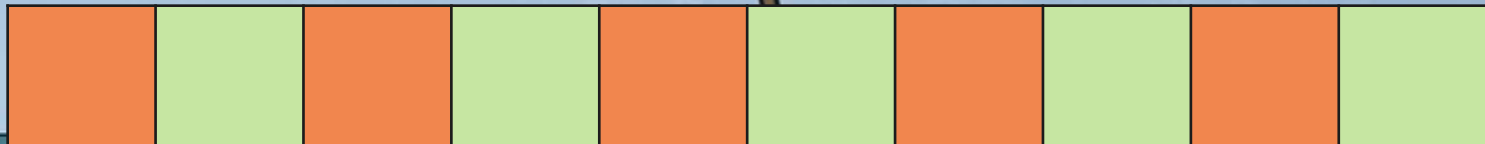- I can add fractions with denominators that are multiples of the same number.

Success Criteria

- I can add fractions with the same denominator.
- I can convert between improper and mixed number fractions.
- I can use multiplication to change a fraction into an equivalent.
- I can add fractions with denominators that are multiples of the same number.

Improper and Mixed Number Fraction Count

Count forwards along the fraction counting stick in mixed numbers.

| 0 | $\frac{1}{5}$ | $\frac{2}{5}$ | $\frac{3}{5}$ | $\frac{4}{5}$ | 1 | $1\frac{1}{5}$ | $1\frac{2}{5}$ | $1\frac{3}{5}$ | $1\frac{4}{5}$ | 2 |

| $\frac{1}{5}$ | $\frac{2}{5}$ | $\frac{3}{5}$ | $\frac{4}{5}$ | $\frac{5}{5}$ | $\frac{6}{5}$ | $\frac{7}{5}$ | $\frac{8}{5}$ | $\frac{9}{5}$ | $\frac{10}{5}$ |

Count backwards along the fraction counting stick in improper fractions.

twinkl.com

Improper and Mixed Number Fraction Count

Count forwards along the fraction counting stick in mixed numbers.

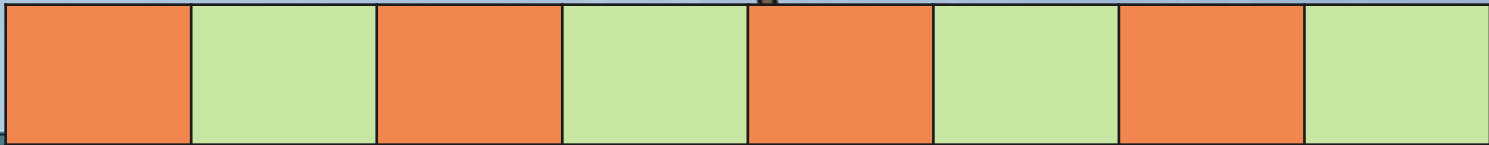| 2 | $2\frac{1}{4}$ | $2\frac{2}{4}$ | $2\frac{3}{4}$ | 3 | $3\frac{1}{4}$ | $3\frac{2}{4}$ | $3\frac{3}{4}$ | 4 |

| $\frac{8}{4}$ | $\frac{9}{4}$ | $\frac{10}{4}$ | $\frac{11}{4}$ | $\frac{12}{4}$ | $\frac{13}{4}$ | $\frac{14}{4}$ | $\frac{15}{4}$ | $\frac{16}{4}$ |

Count backwards along the fraction counting stick in improper fractions.

Improper and Mixed Number Fraction Count

Count forwards along the fraction counting stick in mixed numbers.

| 3 | $3\frac{1}{3}$ | $3\frac{2}{3}$ | 4 | $4\frac{1}{3}$ | $4\frac{2}{3}$ | 5 |

| $\frac{9}{3}$ | $\frac{10}{3}$ | $\frac{11}{3}$ | $\frac{12}{3}$ | $\frac{13}{3}$ | $\frac{14}{3}$ | $\frac{15}{3}$ |

Count backwards along the fraction counting stick in improper fractions.

Same Denominators

In this fraction addition, both the fractions have the **same denominator**.

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

To solve the calculation, the **denominator stays the same**, and the **numerators are added together**.

Same Denominators

In this fraction addition, both the fractions have the **same denominator**.

This is the same answer written as a mixed number.

$$\frac{5}{3} + \frac{6}{3} = \frac{11}{3} = 3\frac{2}{3}$$

This answer is an improper fraction. The denominator tells us the whole is made of three parts.

Same Denominators

In this fraction addition, both the fractions have the **same denominator**.

This answer is an improper fraction. Change it to a mixed number.

This answer can be simplified.

$$2\frac{11}{4} + \frac{3}{4} = \frac{14}{4} = 3\frac{1}{2}$$

This is a mixed number. Change it to an improper fraction before calculating.

Denominator Multiples

In this fraction addition, both the fractions have **different denominators** which are multiples of the same number.

× 2 = 4

× 2 = 6

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

To solve the calculation, we use **multiplication** to change the fraction with the lowest denominator into an **equivalent fraction** with the same denominator as the other fraction.

Remember to do the same multiplication to the numerator.

Denominator Multiples

Now we have a calculation where both the denominators are the same number.

× 2 = 4

× 2 = 6

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

To solve the calculation, the **denominator stays the same**, and the **numerators are added together**.

Denominator Multiples

Let's try this with another calculation where the fractions have different denominators which are multiples of the same number.

× 3 = 9

× 3 = 12

$$\frac{3}{4} + \frac{7}{12} = \frac{9}{12} + \frac{7}{12} = \frac{16}{12} = 1\frac{4}{12}$$

$$= 1\frac{1}{3}$$

Denominator Multiples

Let's try this with another calculation where the fractions have different denominators which are multiples of the same number.

× 5 = 25

× 5 = 10
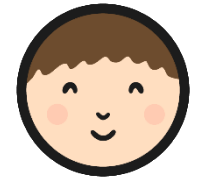
$$\frac{5}{2} + \frac{3}{10} = \frac{25}{10} + \frac{3}{10} = \frac{28}{10} = 2\frac{4}{5}$$

Adding Fractions Match-Up

Adding Fractions Match Up

I can add fractions with denominators that are multiples of the same number.

...st box to the correct postcard by solving the addition calculations. Use different ...ach pair.

$\frac{4}{3} + \frac{7}{12} =$ $\frac{7}{8} + \frac{5}{4} =$ $\frac{9}{15} + \frac{6}{5} =$

$\frac{9}{8} +$ $\frac{5}{3} + \frac{11}{15} =$ $\frac{7}{10} + \frac{6}{5} =$ $\frac{5}{12} + \frac{8}{4} =$

$2\frac{5}{12}$ $1\frac{3}{10}$ $2\frac{7}{8}$

$\frac{1}{12}$ $\frac{9}{0}$ $2\frac{6}{15}$ $2\frac{1}{8}$

...ns Match Up

...at are multiples of the same number.

...lving the addition calculations. Use different
...the postcards as mixed numbers, simplifying

$\frac{7}{24} + 1\frac{3}{8} =$ $\frac{9}{35} + 3\frac{2}{5} =$

$\frac{7}{18} + 3\frac{1}{2} =$ $\frac{5}{21} + 2\frac{5}{7} =$

$\frac{47}{18}$ $\frac{47}{18}$

$\frac{85}{35}$ $\frac{40}{24}$

...ns Match Up

...at are multiples of the same number.

...lving the addition calculations. Use different
...he postcards as mixed numbers.

$3\frac{7}{8} + \frac{5}{4} =$ $2\frac{9}{15} + \frac{6}{5} =$

$1\frac{7}{10} + \frac{6}{5} =$ $3\frac{5}{12} + \frac{8}{4} =$

$\frac{33}{10} = 3\frac{3}{10}$ $\frac{39}{8} = 4\frac{7}{8}$

$\frac{57}{15} = 3\frac{12}{15}$ $\frac{41}{8} = 5\frac{1}{8}$

Bingo

3	$\frac{9}{8}$ or $1\frac{1}{8}$	$\frac{23}{20}$ or $1\frac{3}{20}$
or $1\frac{1}{4}$	$\frac{13}{12}$ or $1\frac{1}{12}$	$\frac{13}{10}$ or $1\frac{3}{10}$

or $1\frac{1}{12}$

or $1\frac{1}{16}$

or $1\frac{3}{20}$

or $1\frac{3}{10}$

Aim

- I can add fractions with denominators that are multiples of the same number.

Success Criteria

- I can add fractions with the same denominator.

- I can convert between improper and mixed number fractions.

- I can use multiplication to change a fraction into an equivalent.

- I can add fractions with denominators that are multiples of the same number.