8.2.21   Fractions

Learning Objective:
We are learning to add and subtract fractions

I will be successful if:
- I can add and subtract fractions with the same denominator.
- I can use the bar models to support my understanding.
- I know that all parts of the whole need to be equal.

Key Vocabulary

fractions as part of a whole
equal
representations
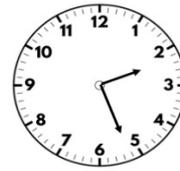shapes
quantities
numerator
denominator
non-unit and unit fractions
improper fractions
mixed number

1) Which is greater, $\frac{5}{8}$ or $\frac{5}{9}$?

2) What comes next? $\frac{1}{10}, \frac{3}{10}, \frac{5}{10},$ ---

3) Work out 22^2

4) Round 8,426 to the nearest hundred.

White Rose Maths

Challenge – Order these numbers in descending order

5) 5.62   6.75   5.31   6.41

6) 0.42   0.24   0.44   0.412

7) 10.5   11.1   10.21   10.2

8) 21.87   27.81   27.18   28.17

1) Which is greater, $\frac{5}{8}$ or $\frac{5}{9}$? $\frac{5}{8}$

2) What comes next? $\frac{1}{10}, \frac{3}{10}, \frac{5}{10},$ --- $\frac{7}{10}$

3) Work out 22^2 484

4) Round 8,426 to the nearest hundred.   8,400

<u>Challenge – Order these numbers in descending order</u>

5) 6.75   6.41   5.62   5.31

6) 0.44   0.42   0.412   0.24

7) 11.1   10.5   10.21   10.2

8) 28.17   27.81   27.18   21.87

Adding fractions with the same denominator.

Here is a bar model to calculate $\frac{3}{5} + \frac{4}{5}$

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

Why do you only add the numerators?

Why does the denominator stay as 5?

Use a bar model to solve the calculations:

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

Subtracting fractions with the same denominator.

Here are two bar models to calculate $\dfrac{7}{8} - \dfrac{3}{8}$

$\dfrac{4 \text{ left}}{8}$

What is the difference between the two methods?

$\dfrac{4}{8}$ left

Use your preferred method to calculate:

$$\dfrac{5}{8} - \dfrac{1}{8} \qquad \dfrac{9}{7} - \dfrac{4}{7} \qquad \dfrac{5}{3} - \dfrac{5}{3} \qquad 1 - \dfrac{2}{5}$$

Use bar models to help you complete the balancing equations.

Calculate:

$$\frac{3}{7}+\frac{5}{7}=\frac{\square}{\square}+\frac{4}{7}$$

$$\frac{9}{5}-\frac{5}{5}=\frac{6}{5}-\frac{\square}{\square}$$

$$\frac{2}{3}+\frac{\square}{\square}=\frac{11}{3}-\frac{4}{3}$$

<u>8.2.21</u>

Have a go at the questions on the sheet attached.

Reasoning challenges

How many different ways can you balance the equation?

$$\frac{5}{9} + \frac{\square}{9} = \frac{8}{9} + \frac{\square}{9}$$

$$\frac{1}{7} + \frac{4}{7} = \frac{9}{7} - \frac{4}{7}$$

A chocolate bar has 12 equal pieces.

Amir eats $\frac{5}{12}$ more of the bar than Whitney.

There is one twelfth of the bar remaining.

What fraction of the bar does Amir eat?

What fraction of the bar does Whitney eat?