



Prior Knowledge (Y5 Unit 8,9,10)

- Identify, name and write equivalent fractions
- Recognise mixed numbers and improper fractions
- Convert improper fractions to mixed numbers and vice versa
- Compare and order fractions whose denominators are multiples of the same number
- Add and subtract fractions with the same denominator
- Problem solving - mixed word problems
- Multiply proper fractions and mixed numbers by whole numbers

Structures and Representations

Number line

Fractions strips/walls

Simplifying Fractions

Factors of 9:
1, 3, 9

Factors of 12:
1, 2, 3, 4, 6, 12

- whole, part
- numerator/denominator
- common denominator
- equivalent
- simplify, simplest form
- factor
- highest common factor
- lowest common multiple
- compare, order
- ascending, descending
- less than/greater than
- proper/improper fraction
- mixed number
- convert

Compare and Order Fractions

↑ ascending ↓ descending > More than < Less than = Equal to


Use the Common Denominator

Use the Common Numerator




Adding and Subtracting Fractions

Same Denominators



$$\frac{4}{7} + \frac{2}{7} = \frac{6}{7}$$



$$\frac{8}{11} - \frac{3}{11} = \frac{5}{11}$$



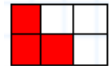
$$\frac{1}{3} + \frac{1}{6}$$

$\frac{1}{3}$ is equal to $\frac{2}{6}$



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

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



$\frac{3}{6}$ can be simplified to $\frac{1}{2}$

Different Denominators

$$\frac{2}{7} + \frac{3}{5}$$

$$\frac{9}{10} - \frac{1}{4}$$

Multiples of 7: 7, 14, 21, 28, **35**
 Multiples of 5: 5, 10, 15, 20, 25, 30, **35**

Multiples of 10: 10, **20**
 Multiples of 4: 4, 8, 12, 16, **20**

$$\frac{2}{7} = \frac{10}{35}, \frac{3}{5} = \frac{21}{35}$$

$$\frac{9}{10} = \frac{18}{20}, \frac{1}{4} = \frac{5}{20}$$

$$\frac{10}{35} + \frac{21}{35} = \frac{31}{35}$$

$$\frac{18}{20} - \frac{5}{20} = \frac{13}{20}$$

Adding and Subtracting Mixed Numbers

Add or subtract the whole numbers and fractions separately.

$$2\frac{2}{5} + 1\frac{3}{10}$$

$$2\frac{1}{2} - 1\frac{1}{4}$$

$$2+1=3$$

$$2-1=1$$

$$\frac{2}{5} + \frac{3}{10} = \frac{4}{10} + \frac{3}{10} = \frac{7}{10}$$

$$\frac{1}{2} - \frac{1}{4} = \frac{2}{4} - \frac{1}{4} = \frac{1}{4}$$

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

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

Convert the mixed numbers to improper fractions.

$$2\frac{2}{5} + 1\frac{3}{10}$$

$$2\frac{1}{2} - 1\frac{1}{4}$$

$$2\frac{2}{5} = \frac{12}{5}$$

$$1\frac{3}{10} = \frac{13}{10}$$

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

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

$$\frac{12}{5} + \frac{13}{10} = \frac{24}{10} + \frac{13}{10} = \frac{37}{10}$$

$$\frac{5}{2} - \frac{5}{4} = \frac{10}{4} - \frac{5}{4} = \frac{5}{4}$$

$$\frac{37}{10} = 3\frac{7}{10}$$


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


Multiplying Proper Fractions

Multiplying Fractions by Fractions

$$\frac{1}{2} \times \frac{1}{3} = \frac{1 \times 1}{2 \times 3} = \frac{1}{6}$$

Multiplying Fractions by Whole Numbers



$$\frac{2}{5} \times 3 \rightarrow$$


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

$$\frac{2}{5} \times \frac{3}{1} = \frac{6}{5} = 1\frac{1}{5}$$

Dividing Fractions by Whole Numbers

$$\frac{2}{5} \div 2 = \frac{1}{5}$$

Multiplication and division are the inverse of one another so:

$\div 2$ is the same as $\times \frac{1}{2}$

$$\frac{2}{5} \times \frac{1}{2} = \frac{2}{10}$$