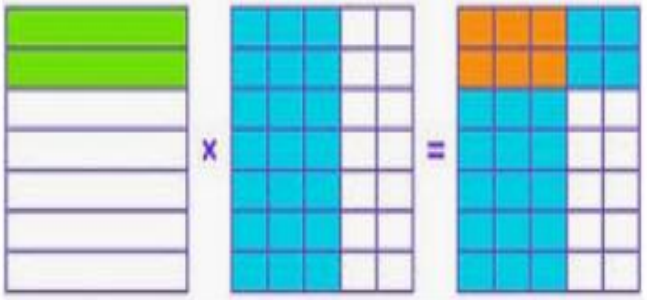
Year 7 – Unit 7 – Calculating with Fractions – Knowledge Organiser
Objective
Know and use the vocabulary associated with fractions
Use diagrams to visualise and represent calculations involving fractions
Add and subtract fractions
Multiplying involving fractions
Dividing involving fractions



Key Facts

$$3\frac{1}{5} - 1\frac{3}{4}$$

$$= \frac{16}{5}{}^{\times 4} - \frac{7}{4}{}^{\times 5}$$

$$= \frac{64}{20} - \frac{35}{20}$$

$$= \frac{29}{20}$$

$$= 1\frac{9}{20}$$

$$3\frac{1}{2} \div 2\frac{5}{8}$$

$$= \frac{7}{2} \div \frac{21}{8}$$

$$= \frac{1}{\cancel{7}} \times \frac{\cancel{8}^{4}}{\cancel{21}_{3}}$$

$$= \frac{1}{1} \times \frac{4}{3}$$

$$= \frac{4}{3}$$

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

Key Concept Check

What is the difference between $\frac{1}{4} + \frac{1}{2}$ and $\frac{1}{4} \times \frac{1}{2}$?

What happens to a number when you divide it by $\frac{2}{3}$?

Key words used in this unit:

Equivalent Fractions – When two fractions have different numerators and denominators, but whose value is the same. E.g. $\frac{2}{4}$ *and* $\frac{1}{2}$.

Simplify (or **cancel**) – When the numerator and denominator are divided by their highest common factor, so that the fraction is in its lowest terms. E.g.

$$\frac{2}{4} \overset{\div 2}{=} \frac{1}{2}$$

Mixed Number – When a whole number and a fraction are combined. E.g. $2\frac{2}{3}$

Vulgar Fraction – When the numerator and denominator are both integers.

Improper Fraction (or **top-heavy** fraction) – When the numerator is bigger than the denominator. E.g. $\frac{9}{4}$