

YEAR 8 — PROPORTIONAL REASONING...

Multiplying and Dividing Fractions

What do I need to be able to do?

By the end of this unit you should be able to:

- Carry out any multiplication or division using fractions and integers
- Solutions can be modelled, described and reasoned

Keywords

Numerator: the number above the line on a fraction. The top number. Represents how many parts are taken

Denominator: the number below the line on a fraction. The number represent the total number of parts.

Whole: a positive number including zero without any decimal or fractional parts

Commutative: an operation is commutative if changing the order does not change the result.

Unit Fraction: a fraction where the numerator is one and denominator a positive integer.

Non-unit Fraction: a fraction where the numerator is larger than one.

Dividend: the amount you want to divide up.

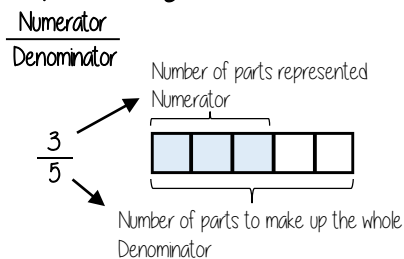
Divisor: the number that divides another number.

Quotient: the answer after we divide one number by another. e.g. dividend ÷ divisor = quotient

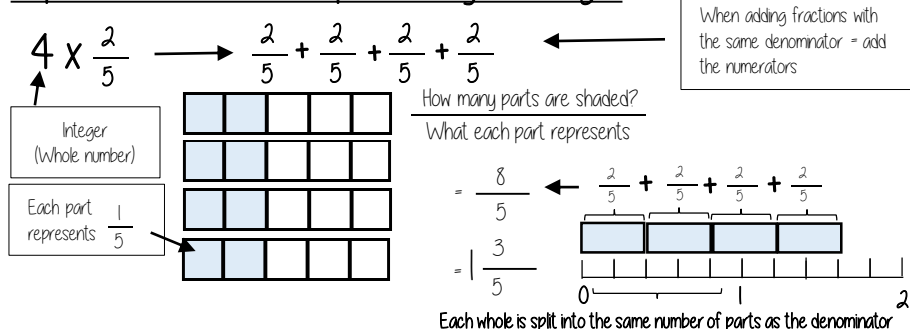
Reciprocal: a pair of numbers that multiply together to give 1



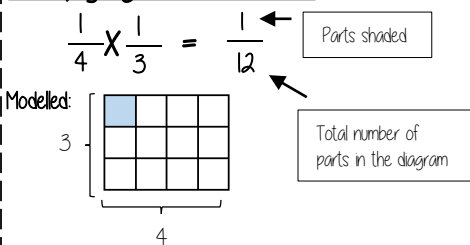
Representing a fraction



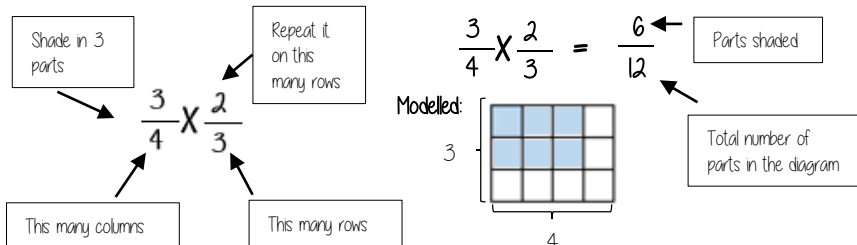
Repeated addition = multiplication by an integer



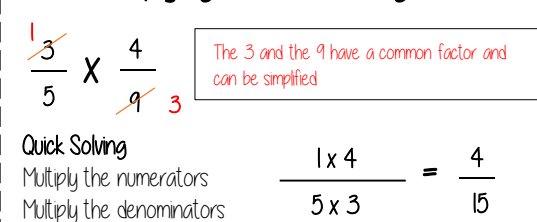
Multiplying unit fractions



Multiplying non-unit fractions

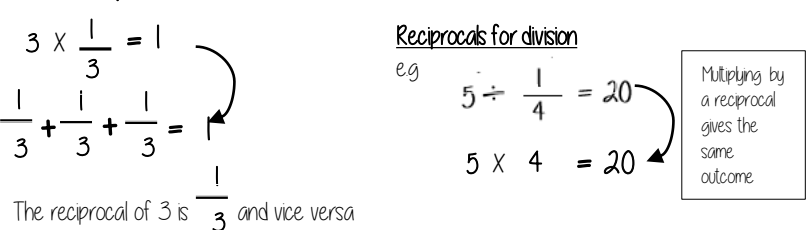


Quick Multiplying and Cancelling down

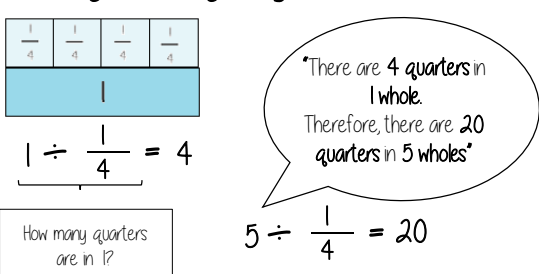


The reciprocal

When you multiply a number by its reciprocal the answer is always 1



Dividing an integer by an unit fraction



Dividing any fractions

Remember to use reciprocals

