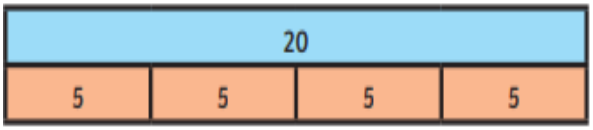
Knowledge Organiser

Year Group	Subject	Topic
5	Maths	Fractions B

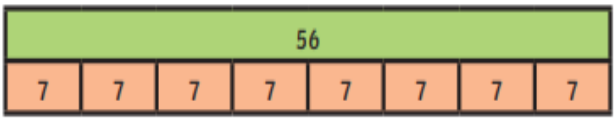
The Big Picture
During this unit, the children will learn how to multiply unit, non-unit fractions and mixed numbers by an integer. They will extend their learning by calculating a fraction of a quantity and a fraction of an amount. Children will explore different ways of finding the whole and how to use fractions as operators. During their learning, children will use concrete manipulatives such as place value charts, counters, fraction walls and multiplication grids to enhance their learning.
Enquiry Questions
What is 2 quarters of 20? What are multiples of 7? What is an integer? How do you multiply a non-unit fraction by an integer? What is an operation? How do you multiply a mixed number by an integer?

To find quarters of 20:



$\frac{1}{4}$ of 20 = 5 $\frac{2}{4}$ of 20 = 10 $\frac{3}{4}$ of 20 = 15 $\frac{4}{4}$ of 20 = 20

To find eighths of 56:



$\frac{1}{8}$ of 56 = 7 $\frac{2}{8}$ of 56 = 14 $\frac{3}{8}$ of 56 = 21 $\frac{4}{8}$ of 56 = 28

$\frac{5}{8}$ of 56 = 35 $\frac{6}{8}$ of 56 = 42 $\frac{7}{8}$ of 56 = 49 $\frac{8}{8}$ of 56 = 56

Multiply Mixed Numbers by Integers

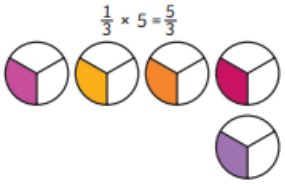
Convert to an improper fraction and multiply the numerator by the integer.

$2\frac{1}{4} \times 2 = \frac{9}{4} \times 2 = \frac{18}{4} = 4\frac{2}{4} = 4\frac{1}{2}$

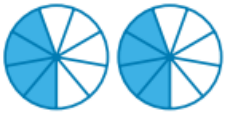
Use repeated addition.

$2\frac{1}{4} \times 2 = 2\frac{1}{4} + 2\frac{1}{4} = 4\frac{2}{4} = 4\frac{1}{2}$

Multiply Unit Fractions by an Integer



Multiply Non-Unit Fractions by an Integer



$2 \times \frac{4}{9} = \frac{8}{9}$

Key Vocabulary	
Unit fraction	Any fraction with 1 as its numerator.
Non-unit fraction	A fraction where the numerator is greater than 1.
Integer	Whole numbers that can be positive or negative.
Operator	Any symbol that indicates an operation to be performed, e.g. +, -, x, ÷
Multiple	A number that can be divided by another number evenly without leaving a remainder.