

## Wk Progression Focus

### 7 Negative numbers; fractions

Week 7 focuses on positive and negative whole numbers, and then comparing, ordering, adding and subtracting fractions, including mixed numbers.

## Weekly Summary

Understand negative numbers; calculate small differences between negative numbers and negative and positive numbers; add and subtract negative numbers; compare fractions with unlike, but related, denominators; correctly use the terms fraction, denominator and numerator; understand what improper fractions and mixed numbers are and add fractions with the same denominator, writing the answer as a mixed number

## Strands

**NPV** Number and place value;  
**PRA** Problem solving, reasoning and algebra; **FRP** Fractions, ratio and proportion

## Objectives

- **NPV.72** Read, write and order negative numbers
- **NPV.73** Use negative numbers in context, and calculate intervals across zero
- **PRA.75** Solve problems involving addition, subtraction, multiplication and division
- **FRP.75** Compare and order fractions, including fractions  $>1$
- **FRP.44** Add and subtract fractions with the same denominator
- **FRP.64** Convert mixed numbers to improper fractions and vice versa
- **FRP.70** Use equivalence to compare, add or subtract unrelated fractions, writing fractions  $>1$  as a mixed number

### 8 Shape, and measurement in relation to shape

Week 8 focuses on 2D shapes, their properties, areas, and perimeters, and 3D shapes, their nets, volumes and properties.

Calculate the perimeter, area and volume of shapes, and know their units of measurement; understand that shapes can have the same perimeters but different areas and vice versa; calculate the area of a triangle using the formula  $A = \frac{1}{2} b \times h$ ; find the area of parallelograms using the formula  $A = b \times h$ ; name and describe properties of 3D shapes; systematically find and compare nets for different 3D shapes.

**MEA** Measurement; **GPS** Geometry: properties of shapes

- **MEA.80** Calculate perimeter of rectangles, triangles, parallelograms and other polygons
- **MEA.81** Calculate area of rectangles and parallelograms including use of formulae
- **MEA.85** Recognise that shapes with the same areas can have different perimeters and vice versa
- **MEA.86** Recognise when it

<p>9     <b>Division; fractions and percentages</b> Weeks 9, 10 and 11 focus on division and fractions; children rehearse mental strategies and short division, giving remainders as fractions; fractions are added, subtracted, multiplied and divided; finding percentages is also covered.</p>	<p>Use mental strategies to divide by 2, 4, 8, 5, 20 and 25; find non-unit fractions of amounts; use short division to divide 3- and 4-digit numbers by 1-digit numbers, including those which leave a remainder; express a remainder as a fraction, simplifying where possible.</p>	<p><b>MMD</b> Mental multiplication and division; <b>FRP</b> Fractions, ratio and proportion; <b>WMD</b> Written multiplication and division; <b>PRA</b> Problem solving, reasoning and algebra</p>	<p>is possible to use formulae for area and volume of shapes</p> <ul style="list-style-type: none"> <li>• <b>MEA.84</b> Calculate volume of cuboids and cubes using <math>\text{cm}^3</math> and <math>\text{m}^3</math></li> <li>• <b>MEA.83</b> Calculate area of a triangle using the formula <math>\frac{1}{2} b \times h</math></li> <li>• <b>GPS.75</b> Recognise, describe, draw and build simple 3D shapes, including making nets</li> </ul>
<p>10    <b>Division; fractions and percentages</b> Weeks 9, 10 and 11 focus on division and fractions; children rehearse mental strategies and short division, giving remainders as fractions; fractions are added, subtracted, multiplied and divided; finding percentages is also covered.</p>	<p>Add and subtract unit fractions with different denominators including mixed numbers; use mental strategies to find simple percentages of amounts, including money</p>	<p><b>FRP</b> Fractions, ratio and proportion; <b>PRA</b> Problem solving, reasoning and algebra; <b>DPE</b> Decimals, percentages and their equivalence to fractions</p>	<ul style="list-style-type: none"> <li>• <b>MMD.75</b> Use mental strategies to divide by 2, 4, 8, 5, 20 and 25</li> <li>• <b>FRP.77</b> Find non-unit fractions of amounts</li> <li>• <b>WMD.78</b> Use short division to divide 3- and 4-digit numbers by 1-digit numbers, remainders as fractions</li> <li>• <b>PRA.78</b> Use mathematical reasoning to investigate and solve problems and puzzles, justify their reasoning</li> <li>• <b>FRP.78</b> Add unit fractions with different denominators</li> <li>• <b>FRP.79</b> Use equivalence to add mixed numbers with different denominators</li> <li>• <b>FRP.80</b> Use equivalence to subtract fractions and mixed numbers with different denominators</li> <li>• <b>PRA.70</b> Identify patterns, devise and test rules and use them to make predictions</li> <li>• <b>PRA.80</b> Solve problems</li> </ul>

11 **Division; fractions and percentages**

Weeks 9, 10 and 11 focus on division and fractions; children rehearse mental strategies and short division, giving remainders as fractions; fractions are added, subtracted, multiplied and divided; finding percentages is also covered.

Multiply fractions less than 1 by whole numbers, converting improper fractions to whole numbers; use commutativity to efficiently multiply fractions by whole numbers; divide unit and non-unit fractions by whole numbers; solve word problems involving fractions.

**FRP** Fractions, ratio and proportion

which require knowing percentage and decimal equivalents of  $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{1}{5}$ ,  $\frac{2}{5}$ ,  $\frac{4}{5}$  and those fractions with a denominator of a multiple of 10 or 25

- **DPE.80** Find simple percentages of amounts
- **DPE.81** Find simple percentages of amounts of money
- **FRP.81** Multiply fractions less than 1 by whole numbers, converting improper fractions to whole numbers
- **FRP.82** Multiply fractions by whole numbers, converting improper fractions to whole numbers
- **FRP.83** Divide proper fractions by whole numbers

