Multiplication and Division: Key Skill 15

YEAR 4

Use mental strategies for division with remainders

Mental strategies means calculating in your head. It is an important everyday skill – we use it at the shops, when we're playing sport, when we're in the car to figure out when we'll get there. When children can multiply and divide in their head, it builds their confidence and lays the groundwork for skills they'll need later.

Division is to share into equal groups or parts. Divide, split, quotient, distribute, share equally and separate all mean the same thing.

A **remainder** is the number left over when the problem cannot be divided equally. For example, if we want to divide 12 slices of cake among 5 people, there would be 2 pieces left over – these are the remainder.

Sometimes division is not exact and this is an important concept for children to understand. Moving objects and dividing them into groups that will leave a remainder is a great way to introduce this concept to children.

Use real-life examples to explain remainders. Talk about sharing out food, money and other items, and ask how many would be left over.

Read "Ride and Divide" by Stuart J. Murphy and work together to work out the solutions to each ride that the friends go on.

Use a number line to repeatedly subtract to build mental division skills and reinforce the idea of a remainder.

WEB LINKS go to:

Notes: Division

Notes: Empty number lines

Video: Repeated subtraction on a number line

Video: Division with remainders

Game: Division and multiplication

Video: Ride and divide book reading with fact family explained

Fractions and Decimals: Key Skill 16

YEAR 4

Model and find equivalent fractions with denominators 2, 4 and 8; 3 and 6; and 5, 10 and 100

A **fraction** is part of a whole that has been broken into equal parts. It has a:

- **numerator** (top number: how many parts we have)
- **denominator** (bottom number: how many parts the whole has been broken up into)
- **fraction bar** (the line in between).

It will help your child to use these words when talking about fractions.

Equivalent fractions are fractions that are equal in value, but have different names e.g. $\frac{4}{8} = \frac{1}{2}$

It's important to remember that fractions show equal parts of a whole. Making fractions using pictures of objects helps children to understand the idea of equivalent fractions.

Equivalent fractions focus on fractions with denominators that are multiples of each other.

- 2, 4 and 8, e.g. $\frac{1}{2} = \frac{2}{4} = \frac{4}{8}$
- 3 and 6, e.g. $\frac{1}{3} = \frac{2}{6}$ or $\frac{2}{3} = \frac{4}{6}$
- 5, 10 and 100, e.g. $\frac{1}{5} = \frac{2}{10} = \frac{20}{100}$ or $\frac{3}{5} = \frac{6}{10} = \frac{60}{100}$

Children find it easier to double to find equivalent fractions than to reduce.

Make fractions with circles and cut them to help you find equivalent fractions. Playdough or paper would be an easy way to make circles to cut into fraction pieces.

To help children to find equivalent fractions we can use visual prompts such as number lines or pictures.

Use Lego pieces to create a fraction wall and use this to help find equivalent fractions.

Break apart wholes of objects (or groups of objects) and experiment to find equivalent fractions.

WEB LINKS go to:

Notes: Fraction activities to do at home

Video: Equivalent fractions song

Video: Equivalent fractions

Video: Equivalent fractions using number strips

Video: Children exploring fractions

Game: Fraction match

Game: Triplets

Game: Haunted fractions