# *Fractions and Decimals: Key Skill 15*

YEAR 6

## Multiply and divide decimals by 10, 100 and 1000

**Decimal places** are the numbers after (to the right of) the decimal point.

Children need to know how to multiply decimals by 10, 100 and 1000 because it helps them to estimate answers, find percentages and better understand decimal place value. This helps children to solve problems involving decimal numbers.

There is a rule for powers of 10 (10, 100, 1 000, 10 000 etc)

To **multiply**, we teach the children to move the decimal point to the **right** 1 place when we multiply by 10, 2 places when we multiply by 100 and 3 places when we multiply by 1000.

e.g. 3.4 x 10 = 34  3.4 x 100 = 340  3.4 x 1000 = 3400

To **divide**, we teach the children to move the decimal point to the **left** 1 place when we divide by 10, 2 places when we divide by 100 and 3 places when we divide by 1000.

e.g. 356.2 ÷ 10 = 35.62  356.2 ÷ 100 = 3.562  356.2 ÷ 1000 = 0.3562

*WEB LINKS go to:*

*Notes: Multiplying and dividing decimals by powers of 10*

*Video: Multiplying decimals by powers of 10*

*Video: Dividing decimals by powers of 10*

*Game: Multiply by 10 machine*

*Game: Place value headings*

*Game: Bingo – times or divide*

# *Fractions and Decimals: Key Skill 16*

YEAR 6

## Solve word problems involving fractions, decimals and money problems

For **word problems**, children need to read a story about a problem (often a real-life problem!) and then figure out what operations are needed to reach the answer.

Word problems are important because children must be able to choose and apply a strategy, estimate, solve it and check their answer. Most children will have difficulties in understanding what they need to do. Ask them to read the question carefully and decide what the most important information is and what operation they need to solve the question.

Try using the **CUBES** strategy for problem solving:

**C** Circle the numbers

**U** Underline the question

**B** Box the keywords

**E** Eliminate information not needed

**S** Solve by showing your working out

Newman's Analysis is another strategy to help with word problems.

1 ***Read*** the question to me.
2 Tell me ***what*** the question is asking you ***to do***.
3 Tell me ***how*** you are going to find the answer.
4 ***Show*** me what to do to get the answer.
5 Now, ***write*** down your answer.

Real-life money problems are always helpful. For example:

- Add the cost of each item in a shopping list to create a shopping budget.
- What is 10% off the cost of items at the supermarket?
- If you eat $\frac{1}{6}$ of a pizza and a friend eats $\frac{1}{5}$, how much is left?

*WEB LINKS go to:*

*Notes: Money smart workbook*

*Video: Super cyril's circus supplies*

*Game: Running the school canteen*

*Game: Fraction word problems*

*Game: Add and subtract money word problems*