Year 5 into Year 6 mathematics:

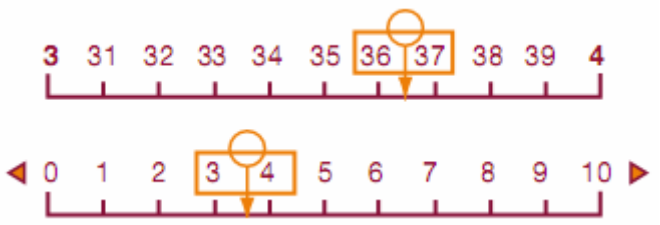
Understanding decimals

Key learning

Read and use decimal numbers; compare two decimal numbers and explain why one is larger than the other. Identify decimal numbers on a scale and place decimal numbers on a number line.

Check that your child can:

- say what each digit represents in a decimal number;
- use decimals in context, for example when measuring, using money or working with a calculator;
- say which two whole numbers a decimal number lies between;
- arrange decimal numbers in order of size.



ICT Links

Use the ITP *Decimal Number Line* at http://www.standards.dfes.gov.uk/primaryframeworks/library/Mathematics/ICTResources/itps/

Ask your child what each digit in a decimal number means and where they would mark them on the various number lines.

Notes for parents/carers

There are lots of examples of decimal numbers around the home. For example, they can be found in newspapers, magazines and on food packets and containers. Talk to your child about these numbers and about what the digits in the number mean.

Building decimal numbers

Ask your child to carry out this addition: 10 + 4 + 0.6 + 0.08.

Together write down the question and then the answer. (14.68)

Read it aloud. ('Fourteen point six eight')

What two whole numbers does 14.68 lie between? (14 and 15) Which whole number is nearest to 14.68? (15)

Together, build other decimal numbers this way. Try three decimal places.

Sorting six decimal numbers

Write these six decimal numbers on pieces of paper or on cards:

7.62	**75.2**	**80.067**	**80.72**	**64.79**	**70.77**

- Together, read each of the numbers aloud.
- What is the value of the digit 7 in each of these numbers?
- Round each decimal number to the nearest whole number. (7.62 is nearest to 8.)
- Now round each to the nearest tenth. (64.79 is nearest to 64.8.)
- Arrange the numbers in order, smallest number first.
- Discuss how you know they are in the correct order.

Make another list of six decimal numbers to sort together.

Make use of opportunities to give your child practical experience of mathematics in the home and everyday life, such as:

- looking for decimal numbers in newspapers or magazines and reading them aloud;
- measuring packets and recording the quantities as decimals then sorting them in order of size.

Asking a question about what your child has learnt in mathematics or had difficulty with in mathematics is often better than telling them.

Fascinating facts

Did you know a flea can jump 200 times its own body length?

Measure your child’s and your own height in metres and record each as a decimal. How far could you each jump if you could both jump 10, 100 or 200 times your height? Can you jump 200 times the width of your hand or 200 times the length of your big toe?

Use the Internet or reference books to research facts and figures that interest your child. For example:

- What is the world record for the long jump?
- How much water is in your body?
- How much heavier is an elephant than a mouse?

Changing decimal digits

On a calculator, ask your child to enter a number between 100 and 1000 with three decimal places (e.g. 638.247). Choose one of the digits in the number (e.g. 4) and challenge your child to add or subtract a number from the number displayed on screen which changes that chosen digit to a new digit (e.g. the 4 to 9 by adding 0.05). Change other digits this way.

Try changing two digits at once (e.g. the 3 and 7 to 4 and 8). Is it always possible to use only one addition or one subtraction (e.g. the 6 to 5 and the 7 to 9)?

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