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 in a decimal number represents;
- 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.

Notes for parents/carers

There are many examples of decimal numbers around the home. They can be found in newspapers, magazines, on food packets and containers. Follow the activity below and talk about numbers and about what the digits in the numbers 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 the answer aloud. ('Fourteen point six eight')

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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 numbers with three decimal places.

Sorting decimal numbers

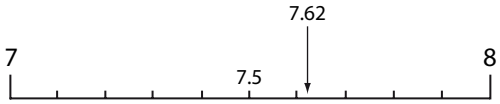
Write these six decimal numbers on pieces of paper or on cards.

7.62	75.2	64.79	80.72	93.57	80.067

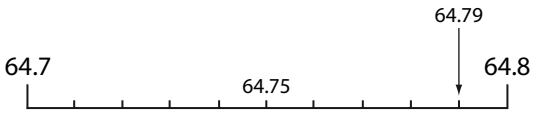
- Together, read each of these numbers aloud.
- What is the value of the digit 7 in each of these numbers?
  (7, 70, 0.7, 0.7, 0.07, 0.007)
- Round each decimal number to the nearest whole number.
  (8, 75, 65, 81, 94, 80)

  (7.62 is nearer to 8 than 7)

  You might find it helpful to draw number lines.



- 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.

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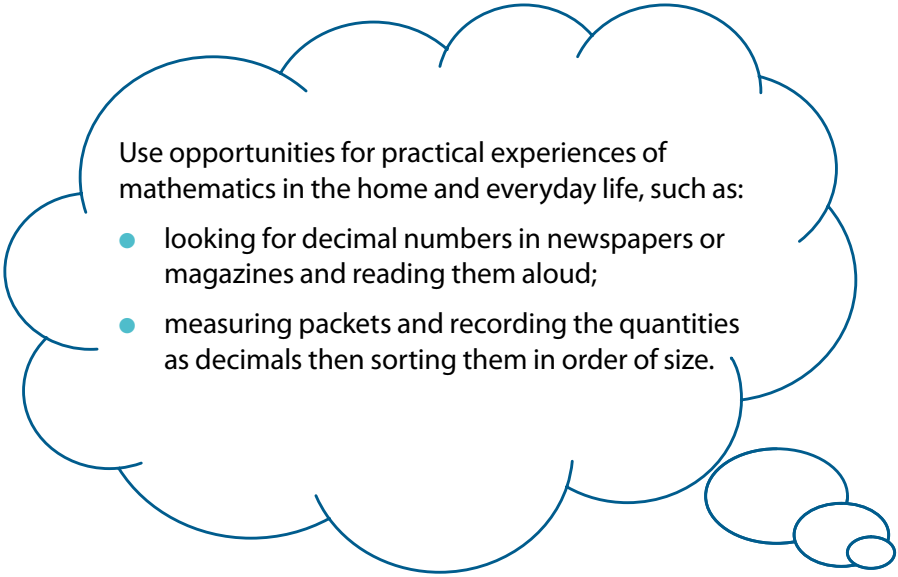
‘Let’s talk about maths’



Changing decimal digits

Ask your child to enter the number 463.27 on a calculator. Set challenges, as below.

- Find the number that you need to **subtract** from this one to leave the answer 403.27.
- Start with 463.27 again. What number do you need to **subtract** to leave 460.17? To leave 3.2? To leave 222.22?
- Start with 584.26. What number do you need to **add** to this to get 600?

Make up some more challenges like this.

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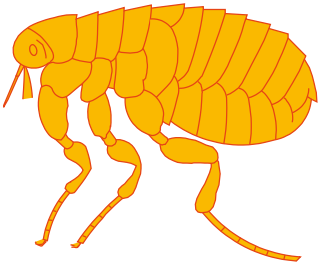
Fascinating facts



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

- Measure your child's height, in metres, and record it as a decimal.
- How far can your child jump?
- If your child could jump 10 times their height, how far would that be?
- If your child could jump 200 times their height, how far would that be?
- Find out what the world record is for the long jump.
- Can you or your child 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:

- How much water is in your body?
- How much heavier is an elephant than a mouse?

ICT links

If you have access to the Internet, you could use the Interactive teaching program (ITP) 'Decimal number line' at:

www.standards.dcsf.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.

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