

# N3 • Rounding numbers

## Mathematical goals

To enable learners to:

- round numbers to the nearest 10;
- round numbers to the nearest 100;
- round numbers to the nearest 1000.

## Starting points

Learners should have some awareness of place value.

## Materials required

For each learner you will need:

- mini-whiteboard.

For each small group of learners you will need:

- at least three one metre long strips of paper or card;
- felt tip pens;
- lots of blank cards approximately 2 cm square;
- glue stick.

## Time needed

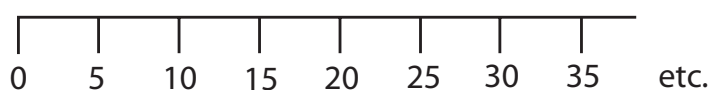
At least 30 minutes.

## Suggested approach **Beginning the session**

Give or ask for some examples of where an exact number is not needed and is sometimes not possible to determine, e.g. the distance travelled between two towns. Discuss why a number rounded to the nearest 10, 100 or 1 000 is sometimes enough, e.g. the size of a crowd at a demonstration.

## Working in groups

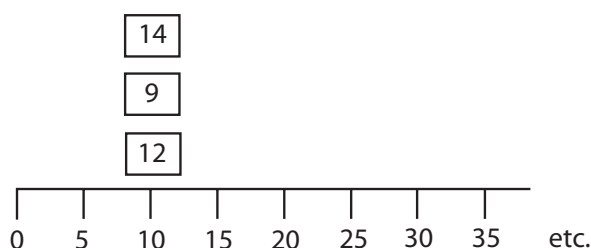
Ask learners to work in pairs and give each pair of learners a long strip of paper (or card). Ask them to mark it out, along the bottom edge, in 5s from 1 to 200 (or more if wanted).



The line does not have to be exactly to scale but the markings should be roughly evenly spaced.

Ask learners to write any number between 0 and 200 on a blank card and place it approximately where it fits on the number line. They should then move the card to the nearest 10 and stick it down. They should repeat this for at least 15 more numbers.

Numbers that are rounded to the same 10 should be stuck down above each other, making a column.



You may prefer to write a selection of suitable numbers on the board for learners to start with, before they think of their own numbers. Include consideration of numbers that are multiples of 5 and introduce the convention of rounding up.

Repeat the exercise for rounding to the nearest 100, using a strip marked in 50s from 1 to 2 000.

Repeat for rounding to the nearest 1 000, using a strip marked in 500s from 0 to 20 000.

## Whole group discussion

Discuss how to round a number without using a number line. If necessary, practise some examples, using mini-whiteboards.

## Reviewing and extending the learning

Using mini-whiteboards, ask questions such as:

Give me a number that is 50 when rounded to the nearest 10.

Give me a number that is 400 when rounded to the nearest 100.

Give me a number that is 6 000 when rounded to the nearest 1 000.

What is the smallest number that is rounded to 60 when rounded to the nearest 10?

What is the largest number that is rounded to 700 when rounded to the nearest 100?

and so on.

### What learners might do next

Round numbers to a given number of significant figures.

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