

Rounding whole numbers to estimate in context

MODULE 1 · PLACE VALUE, DECIMALS AND THE NUMBER SYSTEM

NUMBER

Rounding gives a **quick estimate** you can use to check whether an answer is sensible. Round to a place that suits the situation.

→ $487 \times 21 \approx 500 \times 20 = 10,000$, so an exact answer near 10,000 is believable.

→ A €19.95 + €4.99 shop is **about €25**.

HOW TO ANSWER TODAY

- **Round to nearest....** Look at the digit ONE place to the right of where you're rounding to. 5 or more → round up; less than 5 → keep.
7.34 to nearest tenth → 7.3 (the 4 is less than 5). · 7.36 → 7.4.
- **Expanded form.** Write the number as a sum of its place values. Skip any part that is 0.
 $3,482 = 3,000 + 400 + 80 + 2$ · $70,050 = 70,000 + 50$
- **Value of a digit.** Find which place the digit sits in, then write what it is worth there as a number (not the place name).
In 3,742 the digit 7 sits in the hundreds place. Its value is 700.

WARM-UP

- a. Round 73.2 to the nearest whole number.
- b. Round 15.2 to the nearest whole number.
- c. Round 59.6 to the nearest whole number.
- d. Round 98.3 to the nearest whole number.

PRACTICE

- 1 The school library catalogue shows that **377,265** books have been borrowed across all the primary schools in the county this year. Write **377,265** in expanded form.
- 2 The 5th class raffle for the Christmas hamper raised **€24.37** in coins from the yard collection. Saoirse rounds the total to the nearest tenth of a euro to write a tidy figure on the noticeboard. What is **24.37** rounded to the nearest tenth?
Round 24.37 to the nearest tenth.

CHALLENGE

- 1 At granny's house after Sunday dinner, Oisín helps share out the cost of the takeaway dessert between the cousins. His calculator shows each cousin owes **76.272** before he rounds to euros and cents. What is **76.272** rounded to the nearest hundredth?
Round 76.272 to the nearest hundredth.
- 2 5th class are decorating a World Book Day display board with the total number of words read by all the pupils in the school this term: **6,204,109**. What is the value of the digit **2** in this number?
In 6,204,109, what is the value of the digit 2? (Each zero still holds a place.)

IRISH FACT

A full house at Croke Park

Croke Park holds **82,300** people. Rounded to the nearest thousand, that's about **82,000**.

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