

Curriculum Objectives

- **601.2** Read, write and order decimals.
- 602.2 Identify place value in decimals.
- 603 Round decimals.
- 605 Add and subtract whole numbers and decimals (to 3 decimal places) with and without a calculator.

Change fractions to decimals and change decimals to fractions.

Looking back: What the 5th class programme covered

- 1. Solving problems involving operations with decimals.
- 2. Comparing and ordering decimals.

Maths skills used in this topic

- 1. Applying and problem-solving: Plan and implement solutions to problems in a variety of contexts. Evaluate solutions to problems.
- **2.** Communicating and expressing: Communicate and express mathematical ideas, processes and results in oral and written form.
- **3. Integrating and connecting:** Make mathematical connections within mathematics itself, throughout other subjects, and in applications of mathematics in practical everyday contexts.

Concrete materials

Rulers, 100 squares, abacus, base 10 blocks, unit cubes, coins, place value diagrams, cards with equivalent fractions and decimals

Vocabulary

Decimal number, decimal point, whole numbers, tenths, hundredths, thousandths, place value diagram, fraction form, simplest fraction form, numerator, denominator, decimal fraction, largest fraction, largest decimal, smallest decimal, digit, magic squares, rounding to 2 decimal places, rounding to 1 decimal place, rounding to the nearest cent



Teaching points

1. Before children can grasp the concept of decimals, they need to be very familiar with tenths and hundredths. Revision of tenths and hundredths is advisable so that the children can extend their knowledge to thousandths and then to percentages. If children are exposed to the use of decimals in money and measurement (especially in weight and capacity when introducing thousandths), they are being introduced to the real-life existence of decimals in their lives.

- 2. Remind children of the necessity of keeping the decimal point in line when doing vertical addition and subtraction with decimals. The children need to keep the units under the units, tens under the tens, etc. and also to put the tenths under the tenths, hundredths under the hundredths and thousandths under the thousandths. Emphasise the importance of lining up the decimal points underneath one another and fill in any empty spaces with zero.
- **3.** Make sure that the children grasp the importance of the 0 in the place value of decimal numbers, e.g. when asked to pick out the largest number from 0.2, 0.03, 0.004, we need the children to understand that the largest number is indeed 0.2!

Oral and mental activities

Fans:

Show $\frac{1}{10}$ as a decimal, $\frac{2}{10}$, $\frac{5}{10}$, $\frac{1}{100}$, $\frac{20}{100}$, $\frac{500}{1000}$. Repeat this with the children and increase the difficulty as they show progress with the lower numbers.

Target board 10:

Find pairs of numbers that total 1, 2, etc. Round each number to the nearest whole number. Add each column, round the answer to the nearest whole number. Write each number as a mixed number. Double each number. What is half each number? What must be added to each to reach the next whole number?

Topic suggestions

- **1.** Play Snap (a card game for groups of 2–4) using cards with equivalent fractions and decimals, e.g. $\frac{23}{100}$ and 0.23.
- 2. Play Go Fish (a card game for groups of 2–4). Give each group a set of equivalent fraction cards, e.g. 0.23 and $\frac{23}{100}$. Turn all the cards upside down on the table. A child looks at a card and then turns it upside down again on the table. They try to memorise the position of this card on the table. The aim is to get as many matching pairs as possible. The child who has the most matching pairs wins.
- 3. Name the decimals which are more than $\frac{6}{10}$ but less than 1, etc.
- 4. Place the snap cards of equivalent fractions in order from the smallest to the largest and vice versa.
- 5. Place decimals and fractions in their correct place on the number line. Make quizzes based on this.

Activity A

Pick out the correct answer and write the letter over the box

- 1. The word 'decimal' means this number. (10)
- **2.** Write the next decimal number, 8.56, 8.57, 8.58, 8.59, _____. (8.60)
- **3.** What is the cost altogether of a pair of jeans at €42.50 and runners at €38.95? (€81.45)
- Mary is 2.63m tall and Donal is 3.07m tall. By how much is Donal taller than Mary? (0.44m)
- **6.** Write 0.3 as a fraction. $(\frac{3}{10})$
- 7. Write 0.03 as a fraction. $(\frac{3}{100})$
- 8. This is the temperature of a hot summer day in the south of France. (37.58°C)
- 9. Vehicles must be less than this height in order to go under the bridge safely. (4.65m)

Differentiation

Lower attainers:

Separate activity sheet

Higher attainers:



Separate activity sheet

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	An ANN ANN ANN ANY
	(a) 2011, 2014, 2011,,,,,,,,,
And the sender of the stration with the bound number	(c) Polic, Polic,,,,,,,,
(a) 0.745 7 0.754 (b) 7.3 7.79 7.31 (c) 7.46 7.467 7.461	2. (a) 15 - 5 63 (b) 38-7 - 14-9
Record these seconds are advected to be advected to	(c) 634/8 - 67/39 (d) 56/39 + 7/905 + 7/4
(a) 74.83 (b) 485.36 (c) 4.896 (c) 6.52	(e) 9.6 + 42.753 + 7.64 (f) 4.464 + 34.25 + 6.7
	 Boom 07 03 to be the same of 70 7 and 38 03.
Read these numbers to two stars of decimals	
(a) 87:581 (b) 5:428 (c) 31:068 (c) 79:534	 What must be added to 67-527 to make 80?
(e) 58-853 (f) 6-904	5. Donal assert 0.15 of his money in the DW along and his money on encodes and a of his mon
Sola	on clothes. What decimal fraction of his money had he left?
(a) 647-5 + 67-94 + 75 (b) 967-716 - 64-8	
(0.783-67 + 5-952	 There are 2,196 fiction books in the local library, which is 0-6 of the total number of books in t
Change these fractions into decimal numbers.	library. What is the total number of books in the library?
(a) 🛓 (b) 📥 (c) 📥 (d) 🚢	7. By how much is the 9 in 975-4 greater than 9 in 3-4697
w1 01 w1	
Write the value of the underlined digit.	 Increase 32 by 0.25.
(a) 6-289 (b) 3-228 (c) 378-2 (d) 40-229	9. Decrease C10 by C0.75.
(e) 23-905 (f) 4-789	
Write these decimal numbers in fraction form.	10. Liam has 0 1 of C10, Rossin has 0 25 of C10 and Carly has 0 5 of C10. How much has energy ge showshoed.
(a) 0-4 (b) 0-67 (c) 0.845 (d) 4-3	andprater
(e) 8-003 (f) 9-52	11. What decimal of (1 is 10c?
Change each of these fractions to decimal numbers.	17 ATT 1 1 1 1 4
(a) (b) (c) (b)	
Betty had 095. She spent 0/20 on gocerties.	13. (1-65 - g + (0-5 of 1)
(a) How much did she spend on groceries?	14 See hats 0.1 of the porcorn on Seturity: 0.03 of the porcorn on Sendar and 0.02 of the
(b) How much had she left when she bought the groceries?	popcorn on Monday. What fraction of the popcorn was left?
9,350 babies were born last year in the local maternity hospital. 0.6 of the babies were boys.	
How many were gids?	15. Write the following in fraction form.
2	(a) 0.4 (b) 0.4 (c) 1.06 (d) 4.625 (e) 7.98
ne: Date:	Name: Date:

Linkage

Measures: Money, Weight, Length, Capacity, Area

Number: Operations – (Addition, Subtraction, Multiplication, Division), Place value, Problem solving, Percentages, Fractions

Integration

Geography: Record weather data

Cookery: Measurement

Physical education: Comparing winning times of races with times of second and third places

Maths at home/parental involvement

- **1.** Be aware of the use of decimals in the world of sport, e.g. lap times, race times, extra time, injury time.
- 2. Observe the use of decimals in measurement, e.g. buying petrol, measuring for baking, measuring wood, wire, etc. for DIY, buying in the supermarket.

Notes