# Worksheet - Fractions and decimals: tenths and hundredths

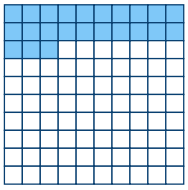
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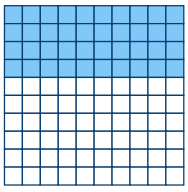
Show your working.

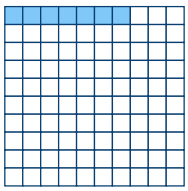
## Question 1

**Question 1 – Shading hundredths** *(Section A · Practice)*

Each square is divided into 100 equal small squares. Write the shaded part as a fraction out of 100 and as a decimal.

a. Square A shows the shaded part: 

b. Square B shows the shaded part: 

c. Square C shows the shaded part: 

## Question 2

**Question 2 – Fractions to decimals** *(Section A · Practice)*

Copy and complete the table. Write each fraction as a decimal, or each decimal as a fraction.

| Fraction | Decimal |
|---|---|
| $\frac{3}{10}$ | ? |
| $\frac{9}{10}$ | ? |
| $\frac{47}{100}$ | ? |
| ? | 0.8 |
| ? | 0.05 |
| $\frac{12}{100}$ | ? |

## Question 3

**Question 3 – Place value** *(Section A · Practice)*

Write the value of the underlined digit, shown in bold, in each number.

a. 4.**7**3
b. 6.**2**
c. **8**.05
d. 0.**9**1
e. 12.3**4**

## Question 4

**Question 4 – Ordering decimals** *(Section A · Practice)*

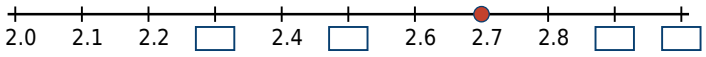
Put the decimals in order, smallest first. Then fill in the signs < or >.

a. 0.7, 0.07, 0.17, 0.71
b. 1.5, 1.05, 0.55, 5.1
c. 0.45 [ ] 0.5 and 3.2 [ ] 3.19

## Question 5

**Question 5 – Decimal number line** *(Section A · Practice)*

Look at the number line. It shows the numbers from 2 to 3 in steps of 0.1. The red dot is at one number. Write the number shown by the dot, then write the numbers that go in the empty boxes.




a. What number does the red dot show?
b. Write the four numbers that go in the boxes.
c. Which number is halfway between 2 and 3?

## Question 6

**Question 6 – Dividing and rounding** *(Section A · Practice)*

Work out each division, then round the answer to the nearest whole number.

a. 9 ÷ 10
b. 74 ÷ 10
c. 5 ÷ 100
d. 386 ÷ 100
e. 250 ÷ 100

## Question 7

**Question 7 – Chocolate bar** *(Section B · Real-life practice)*

A bar of chocolate has 10 squares. Nasim eats 4 squares on Monday, 2 squares on Tuesday and 3 squares on Wednesday.



a. What fraction of the bar did he eat on Monday? Write it as a decimal.
b. What fraction did he eat in all three days? Write it as a fraction and a decimal.
c. What fraction of the bar is left?
d. His sister says that he ate 0.9 of the bar, so 0.1 is left. Is she right?

## Question 8

**Question 8 – Money and decimals** *(Section B · Real-life practice)*

Tom has a money box with £12.45 in it. He buys a comic for £3.20 and a pencil case for £4.75.

a. Write the amount in pounds and pence.
b. Write the price of the comic in pence and in pounds.
c. How much do the two items cost together?
d. How much money is left in the money box?

## Question 9

**Question 9 – The long jump** *(Section B · Real-life practice)*

Four children took part in the school long jump. Their best jumps are shown in the table.

| Name | Jump (m) |
|---|---|
| Ava | 2.45 |
| Ben | 2.54 |
| Cara | 2.4 |
| Dev | 2.05 |

a. Who jumped the furthest?
b. Put the jumps in order, longest first.
c. Round each jump to the nearest whole metre.
d. How much further did Ben jump than Cara? Give your answer in metres and centimetres.

## Question 10

**Question 10 – Fruit at the market** *(Section B · Real-life practice)*

At a market stall, Mrs Ali buys fruit. She buys 0.5 kg of grapes, 1.25 kg of apples and 0.75 kg of plums.

a. Write 0.5 kg, 1.25 kg and 0.75 kg in grams.
b. What is the total mass of the fruit in kilograms?
c. Which is heavier, the apples or the grapes and plums together?
d. The apples cost £2 per kilogram. How much do the apples cost?

## Question 11

**Question 11 – Juice and glasses** *(Section B · Real-life practice)*

A jug holds 2 litres of juice. Each glass holds 0.2 litres. A big bottle holds 1.5 litres.

a. How many tenths of a litre are in one glass? Write this as a fraction.
b. How many glasses can be filled from the jug?
c. How many glasses can be filled from the big bottle? Is there any juice left over?
d. The jug and the bottle are poured together. How many litres is that?

## Question 12

**Question 12 – Plant growth** *(Section B · Real-life practice)*

Aisha measures the height of her sunflower each week. Week 1: 4.3 cm. Week 2: 6.8 cm. Week 3: 10.2 cm. Week 4: 15.5 cm.

a. How much did the sunflower grow between Week 1 and Week 2?
b. In which week was the growth the biggest? Show your working.
c. Round each height to the nearest cm.
d. The sunflower is 15.5 cm in Week 4. Write this height in millimetres.

## Question 13

**Question 13 – Race times** *(Section B · Real-life practice)*

Four friends run 100 metres. Their times in seconds are: Zoe 15.3, Max 14.85, Lily 15.03 and Sam 14.9.

a. Who was the fastest? (The fastest has the smallest time.)
b. Put the times in order, fastest first.
c. Round each time to the nearest second.
d. Max says, "My time is 14.85, which is 14 and 85 tenths." What mistake has he made? What does 14.85 mean?

## Question 14

**Question 14 – Cake slices** *(Section B · Real-life practice)*

A round cake is cut into 100 tiny equal pieces for a party. The guests eat different amounts: Ali eats 0.25 of the cake, Bea eats 0.4 and Chen eats 0.15.

a. Write 0.25, 0.4 and 0.15 as fractions out of 100.
b. How much of the cake did they eat altogether? Write your answer as a decimal and as a fraction.
c. How much of the cake is left?
d. Who ate the most? Who ate the least?

## Question 15

**Question 15 – Pocket money savings** *(Section C · Problem solving)*

Maya, Ben and Ravi save pocket money. The table shows how much each has saved at the end of each month.

| Month | Maya | Ben | Ravi |
|---|---|---|---|
| January | £2.50 | £3.05 | £2.00 |
| February | £5.20 | £5.50 | £4.75 |
| March | £7.85 | £8.05 | £7.60 |

a. Who had the most money at the end of March? Put the three amounts in order, largest first.
b. How much did Maya save in February alone?
c. How much more did Ben have than Ravi at the end of January? Write the answer in pounds and in pence.
d. They put their March savings together. How much is that? Round the total to the nearest pound.
e. Ravi says, "£7.6 is the same as £7.60." Is he right? Explain how to write amounts of money.

## Question 16

**Question 16 – Ribbon shop** *(Section C · Problem solving)*

A shop sells ribbon by the metre. Ella buys three ribbons: red 1.35 m, blue 2.4 m and yellow 0.85 m. The ribbons cost £2 per metre.

a. Write each length in centimetres.
b. Find the total length in metres.
c. How much do the three ribbons cost altogether?
d. Ella needs 5 m of ribbon for a project. How much more ribbon does she need?
e. She says that the blue ribbon is longer than the red and yellow ribbons together. Is she right? Explain.

## Question 17

**Question 17 – Swimming pool** *(Section C · Problem solving)*

A school swimming pool is 25 m long. Four swimmers record their times for one length. The table also shows how many lengths each swam.

| Swimmer | Time for one length (s) | Lengths |
|---|---|---|
| Amy | 24.6 | 8 |
| Ben | 27.15 | 6 |
| Cleo | 24.06 | 10 |
| Dan | 26.9 | 8 |

a. Who swam one length fastest? Put the times in order, fastest first.
b. Round each time to the nearest second.
c. How many metres did Cleo swim in total?
d. How many more metres did Amy swim than Ben?
e. The coach says, "Ben’s time of 27.15 is nearly the same as Dan’s 26.9, but not quite." Work out the difference between them.

## Question 18

**Question 18 – Cooking club** *(Section C · Problem solving)*

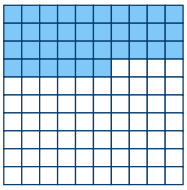
The cooking club makes a fruit salad. The recipe uses these amounts: strawberries 0.35 kg, grapes 0.4 kg, apples 0.6 kg and bananas 0.25 kg. The club makes the recipe twice.

a. How much fruit does one recipe use?
b. How much fruit is needed for two recipes?
c. Which fruit is the heaviest in the recipe? Which is the lightest?
d. A big bowl holds 3 kg of fruit salad. Is two recipes enough to fill the bowl? Explain.
e. The club has 1 kg of grapes. How much is left after making two recipes?

## Question 19

**Question 19 – Hundred square hunt** *(Section C · Problem solving)*

The hundred square below has 100 equal squares. Zara colours squares to make a pattern. She colours 36 squares blue, 24 squares yellow and 15 squares red. The rest she leaves white.



a. Write the fraction of the square that is blue, yellow and red, as fractions out of

100 and as decimals.
b. What fraction of the square is coloured altogether?
c. How many squares are white? Write this as a decimal.
d. She says that the red squares make 0.15, which is more than 0.2. Is she right? Explain.
e. She colours some of the white squares green so that 0.9 of the square is coloured. How many squares does she colour green?

## Question 20

**Question 20 – Challenge: mystery decimal** *(Section D · Challenge)*

Find the mystery decimals using the clues.

a. I am between 3 and 4. My tenths digit is double my hundredths digit. The digits add up to 9. What could I be?
b. I am a decimal with two decimal places, bigger than 0.5 and smaller than 0.6. My hundredths digit is 3 more than my tenths digit. What am I?
c. Write three different decimals between 0.4 and 0.5. Which one is the closest to 0.5?