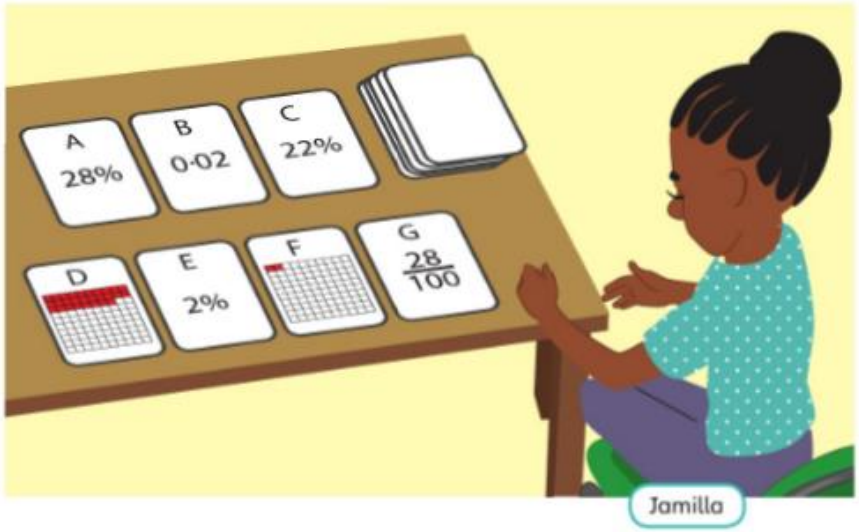
Monday 27.4.2020 Year 5 Modelled Examples Unit 11 Lesson 11

You may also wish to visit https://whiterosemaths.com/homelearning/year-5/
(**not** summer term) Week 2 **Lesson 4 - Percentages as fractions and decimals**

Percentages as fractions and decimals

Discover

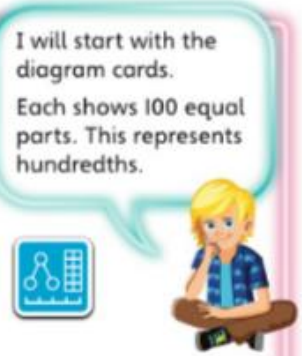


1 a) Find two sets of three matching cards.

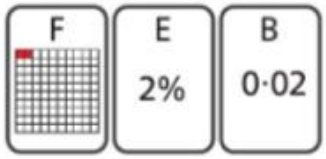
b) Write a fraction and draw a diagram to match the remaining card.

Share

a) Card D shows 28 squares shaded out of 100. This can be written as 28% (Card A) and as $\frac{28}{100}$ (Card G).



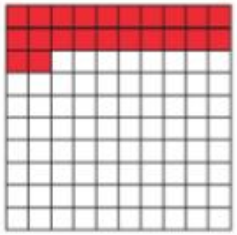
Card F shows 2 squares shaded out of 100. This can be written as 2% (Card E) and as $\frac{2}{100}$. $\frac{2}{100}$ is the 2 hundredths which is equivalent to the decimal 0·02 (Card B).



b) The remaining card is Card C, which shows 22%.

22% is 22 equal parts out of 100 and so can be written as $\frac{22}{100}$.

This can be represented on a hundredths grid like this:

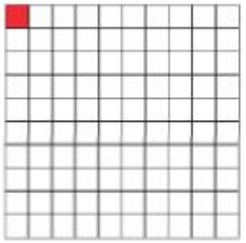


Discuss with your carers then complete the activities in your maths book

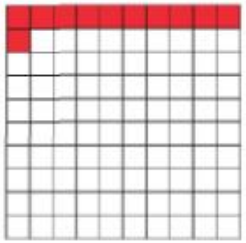
Think together

1 Write the numbers represented by each diagram as a fraction, decimal and percentage.

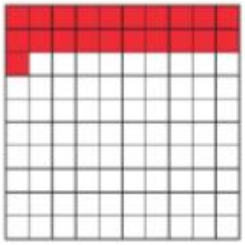
a)



b)



c)

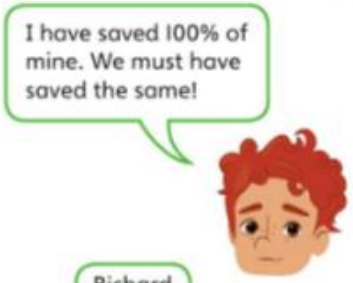


2 Complete the table to show the equivalent fractions, decimals and percentages.

70% $\frac{12}{100}$ 5% 0·09 $\frac{5}{100}$ 0·7 9% 0·12

Fraction	Decimal	Percentage
$\frac{9}{100}$		
	0·05	
		12%
$\frac{70}{100}$		

3 a) Ambika and Richard are talking about saving their pocket money.



Explain why Richard could be wrong.

b) Ambika wants to convert 100% into a decimal.

Show how to write 100% as a decimal.

Tuesday 28.4.2020 Year 5 Modelled Examples Unit 11 Lesson 12

You may also wish to visit https://whiterosemaths.com/homelearning/year-5/
(Not summer term)Week 2 **Lesson 5 - Equivalent FDP**

Equivalent fractions, decimals and percentages

Discover

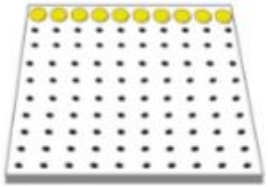
1 a) Look at the pegboard in front of Luis. What fraction, percentage and decimal of the board is covered by circle pegs?

What fraction, percentage and decimal of the board is covered by square pegs?

b) What fraction, percentage and decimal of the board is covered by triangle pegs?

Share

a) The circle pegs fill 10 out of 100.



They fill 1 row out of 10.

$\frac{10}{100} = 10\%$

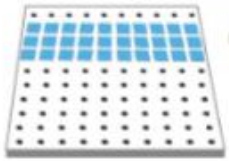
$\frac{10}{100} = \frac{1}{10}$

$\frac{1}{10}$, 10% or 0·1 of the board is covered by circle pegs.

$\frac{1}{10} = 0{\cdot}1$

I can say that $\frac{1}{10}$ is equivalent to 10% or 0·1.

The square pegs fill 30 out of 100. They fill 3 rows out of 10.



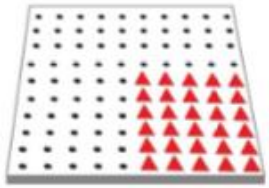
$\frac{3}{10}$ is equivalent to 30% or 0·3.

$\frac{3}{10}$, 30% or 0·3 of the board is covered by square pegs.

b) The triangle pegs are in 6 rows of 5.

$6 \times 5 = 30$

That is 30 pegs out of 100.



$\frac{30}{100} = \frac{3}{10} = 0{\cdot}3 = 30\%$

$\frac{3}{10}$, 30% or 0·3 of the board is covered by triangle pegs.

It is still $\frac{3}{10}$, even though it is not 3 full rows.

Discuss with your carers then complete the activities in your maths book p163

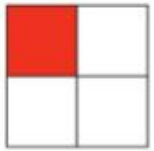
Think together

1 Convert these decimals, fractions and percentages to complete the table.

Decimal	0·1	0·2				1	0
Tenths	$\frac{1}{10}$			$\frac{8}{10}$			
Hundredths	$\frac{10}{100}$				$\frac{90}{100}$		
Percentage	10%		40%				

2 What fraction, decimal and percentage is shaded?

a) 

b) 

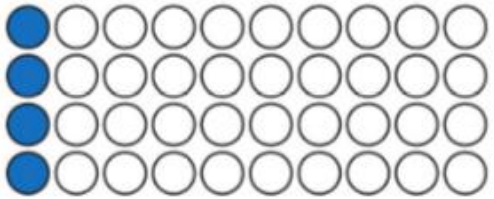
c) 

3 a) Andy and Reena both took a test. Reena scored 30 out of 60. Andy scored 30%.

How can you compare their scores?

b) Emma has 40 marbles. 4 are blue.

What percentage are blue?



Wednesday 29.4.2020

Year 5 Modelled Examples Unit 11 Unit check

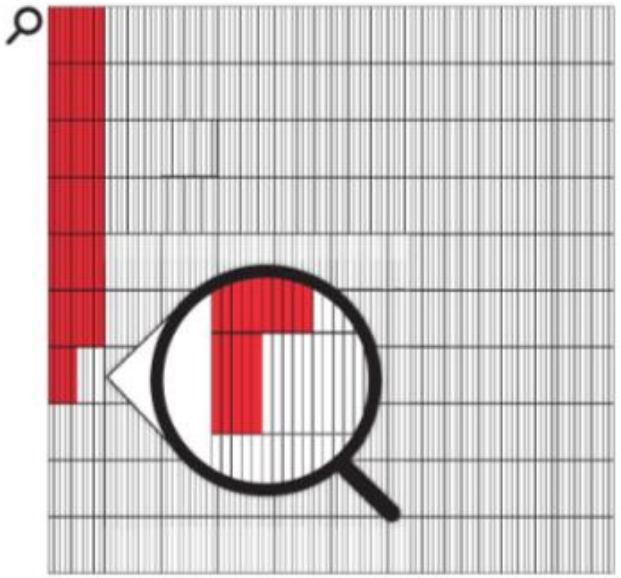
End of unit check

1 Which fraction is represented in the place value grid?

O	•	Tth
0	•	3

A $\frac{3}{10}$ B $\frac{10}{3}$ C $\frac{3}{100}$ D $\frac{1}{3}$

2 Which decimal is shown?



A 0·65 B 6·5 C 0·065 D 1·650

3 Which number would complete the statement correctly?

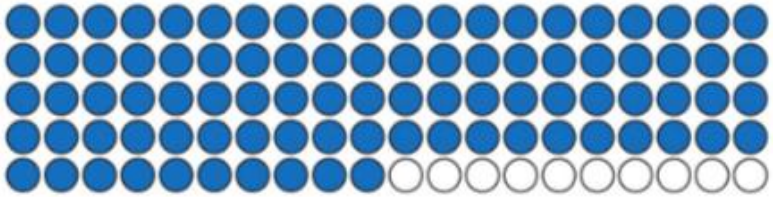
3·802 > ☐

A 3·9 B 3·81 C 3·8 D 4

4 What is 9·55 rounded to the nearest tenth?

A 9·5 B 9·65 C 10 D 9·6

5 Which pair is represented here?



A 0·9 and 9%

B $\frac{9}{100}$ and 90%

C 80% and $\frac{8}{10}$

D 90% and 0·9

6 Put these fractions, decimals and percentages in order from smallest to greatest.

0·3 13% $\frac{31}{100}$ 0·04 $\frac{2}{10}$ $\frac{130}{1,000}$

Smallest ☐ ☐ ☐ ☐ ☐ ☐ Greatest

We've made it to the third book – 5C

Unit 12
Decimals

In this unit we will ...

- Add and subtract decimals with the same number of digits after the decimal point
- Add and subtract decimals with a different number of digits after the decimal point
- Add whole numbers to decimals
- Subtract decimals from whole numbers
- Solve problems involving addition and subtraction of decimals including money problems
- Multiply and divide decimals and whole numbers by 10, 100 and 1,000

We will need some maths words.
Do you know what they all mean?

add **subtract** **decimal** **tenths**
hundredths **thousandths** **multiply**
divide **decimal point** **whole**
column **exchange** **place value**
decimal place **digit**

We will need to use column methods.
How can we add these two numbers?

H	T	O
●	●●	●●●●● ●
	●●●●● ●●	●●●●●

	H	T	O
	1	2	6
+		7	5

We also need to be able to subtract numbers.

Can you remember a way of making 500 – 367 easier?

Why are these two calculations the same?

	H	T	O
	5	0	0
–	3	6	7

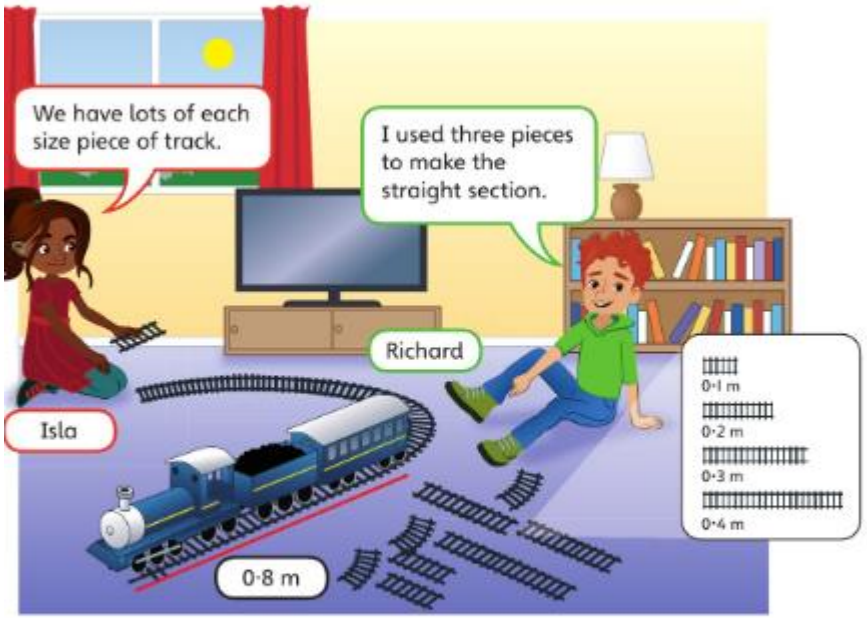
	H	T	O
	4	9	9
–	3	6	6

Thursday 30.4.2020 Year 5 Modelled Examples Unit 12 Lesson 1

You may also wish to visit https://whiterosemaths.com/homelearning/year-5/
Summer term week 1 **Lesson 1 - Adding decimals within 1**

Adding and subtracting decimals 1

Discover



1 a) Which pieces of track could Richard have used to make the straight section?

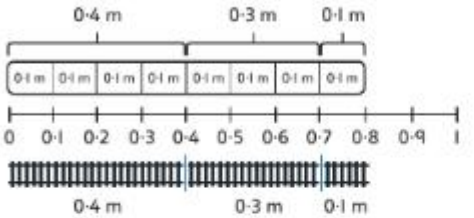
b) Isla uses different pieces of track.

What other ways could Isla have made a track of 0·8 m?

Share

a) There are track pieces 0·1 m, 0·2 m, 0·3 m and 0·4 m long.

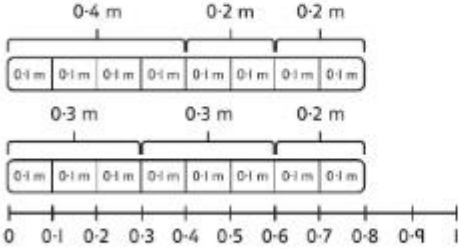
We need to find three pieces that add up to 0·8 m.



0·4 m + 0·3 m + 0·1 = 0·8 m

Richard could have used 0·4 m, 0·3 m and 0·1 m track pieces to make the straight section.

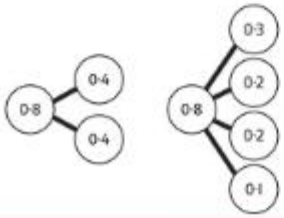
b) There are several possible answers.



0·4 + 0·2 + 0·2 = 0·8

Isla could have used one 0·4 m and two 0·2 m pieces.

Or she could have used two 0·3 m and one 0·2 m pieces to make a track of 0·8 m.

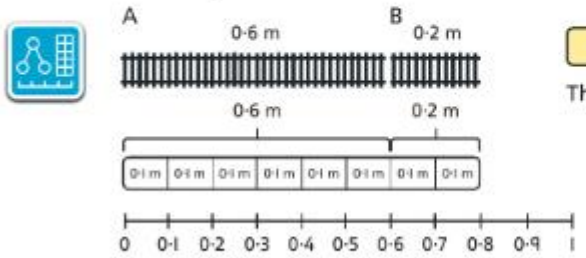


Discuss with your carers then complete the activities in your maths book

Think together

1 **a)** These pieces of track (A and B) are put together.

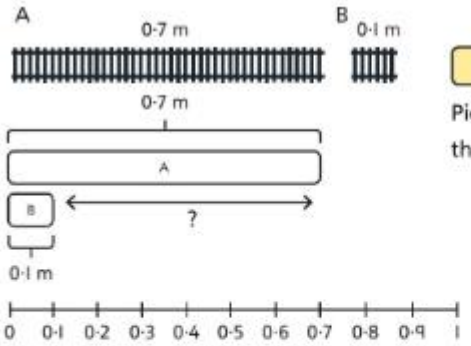
How long is the track in total?



☐ m + ☐ m = ☐ m

The track is ☐ m in total.

b) How much longer is track piece A than B?



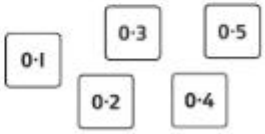
☐ m − ☐ m = ☐ m

Piece A is ☐ m longer than piece B.

2 **a)** Which two numbers add up to 0·9?

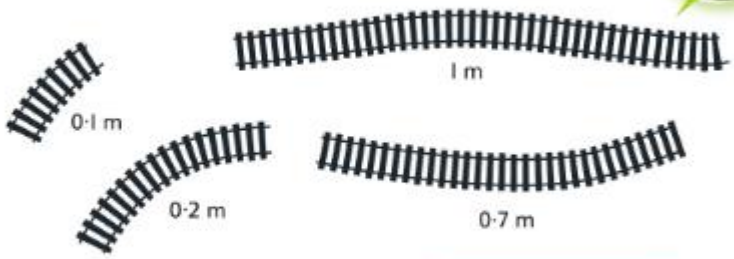
b) Which cards have a difference of 0·1?

c) Which two cards add up to 0·6 and have a difference of 0·2?



3 Here are some more pieces of track.

CHALLENGE



a) Isla puts the 0·1 m, 0·2 m and 0·7 m pieces of track together.

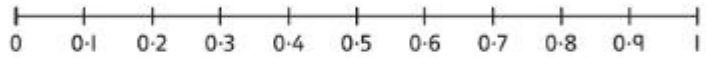
What mistake has Isla made?

The total length of my track is 0·10 m, because 1 + 2 + 7 = 10

Isla

b) Richard puts the 0·7 m and 1 m pieces of track together.

What is the difference between the two pieces?



I used a number line and added on to find the difference.

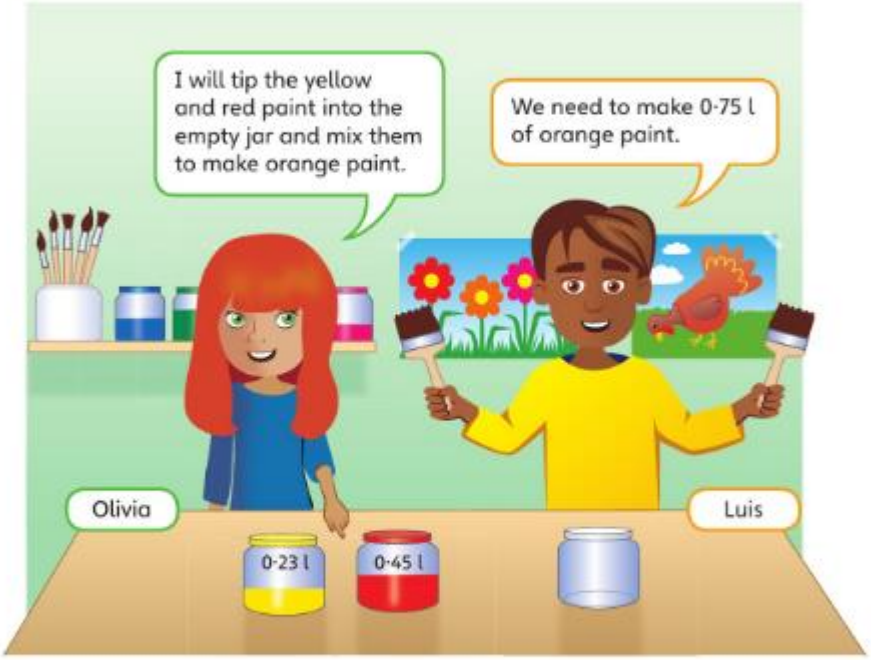
I subtracted 0·7 m from 1 m.

Friday 30.4.2020 Year 5 Modelled Examples Unit 12 Lesson 2

You may also wish to visit https://whiterosemaths.com/homelearning/year-5/
Summer term week 1 **Lesson 2 - Subtracting decimals within 1**

Adding and subtracting decimals 2

Discover



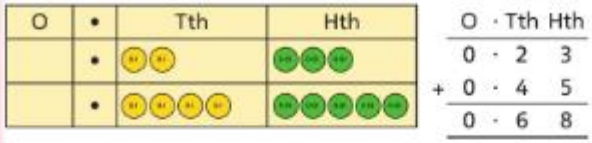
1 a) How much orange paint can Olivia and Luis make?

b) How much more orange paint do they need to make?

Share

I used column addition, just like when adding whole numbers.

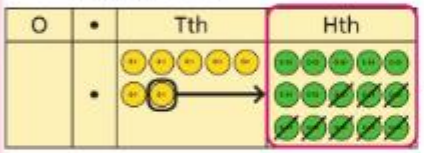
a) Olivia and Luis can add 0·23 l of yellow paint to 0·45 l of red paint.



O	·	Tth	Hth
0	·	2	3
+ 0	·	4	5
0	·	6	8

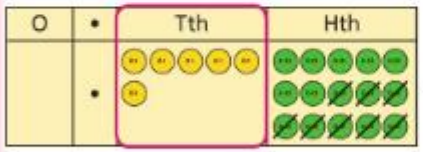
0·23 + 0·45 = 0·68 Olivia and Luis can make 0·68 l of orange paint.

b) A subtraction will show how much more orange paint they need to make.



O	·	Tth	Hth
0	·	6 7	1 5
− 0	·	6	8
	·		7

First, exchange 1 tenth for 10 hundredths. Then, subtract the hundredths.



O	·	Tth	Hth
0	·	6 7	1 5
− 0	·	6	8
0	·	0	7

Subtract the tenths.

0·75 − 0·68 = 0·07 l

O	·	Tth	Hth
0	·	6 7	1 5
− 0	·	6	8
0	·	0	7

Olivia and Luis need to make 0·07 l more orange paint.

Discuss with your carers then complete the activities in your maths book

Think together

1 **a)** Look at the containers. How much orange paint can be made?

O	•	Tth	Hth
	•		
	•		

O	·	Tth	Hth
0	·	4	1
+ 0	·	4	2
	·		

☐ + ☐ = ☐ l

☐ litres of orange paint can be made.

b) Bronwyn adds the water and the blackcurrant to make blackcurrant squash.

How much squash can be made?

O	•	Tth	Hth
	•		
	•		

O	·	Tth	Hth
	·		
+	·		
	·		

☐ + ☐ = ☐ l

☐ litres of squash can be made.

2 **a)** Jamilla has two tins of soup. How much soup does she have in total?

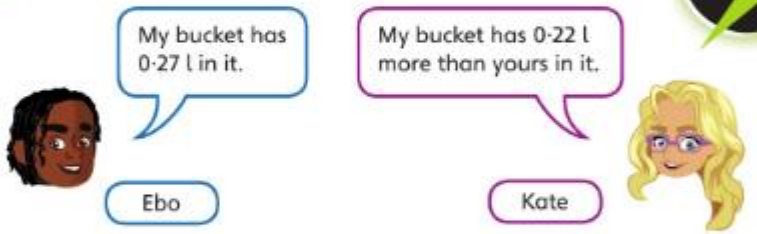
Jamilla has ☐ l of soup in total.

b) She needs 1 litre of soup for all her friends for lunch. How much more does she need?

Jamilla needs ☐ l more soup.

3 Kate and Ebo each have a bucket of slime.

CHALLENGE



a) How much slime do they have altogether?

b) They need 1 litre of slime in total. How much more slime do they need?