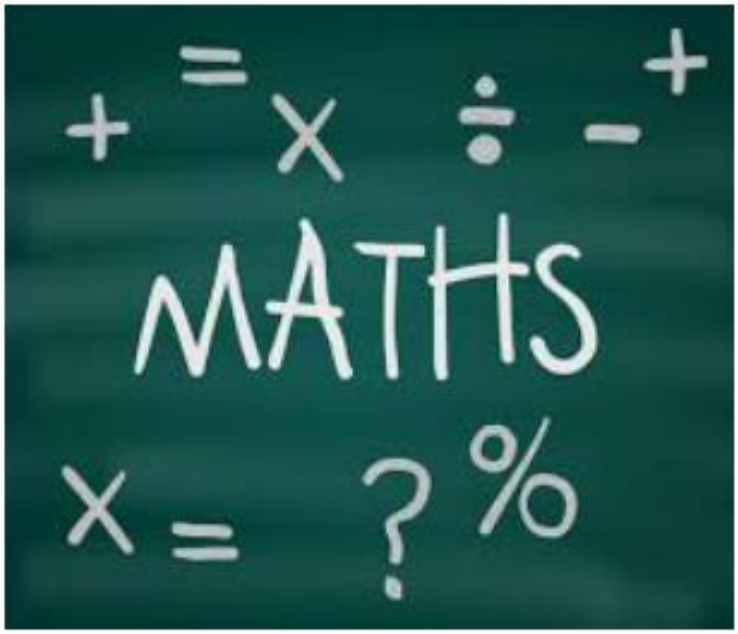
STUKELEY MEADOWS PRIMARY SCHOOL

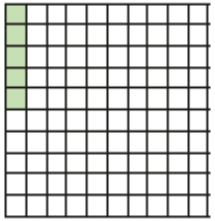


Year 5 – Maths Booklet

April 2021

Decimals as fractions (1)

1 The hundred square represents 1 whole.

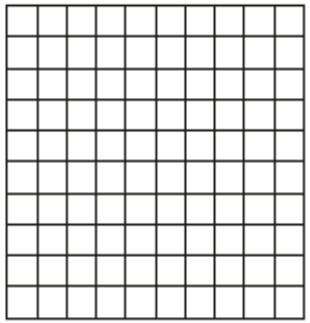


a) What fraction is represented by the shaded squares? ☐

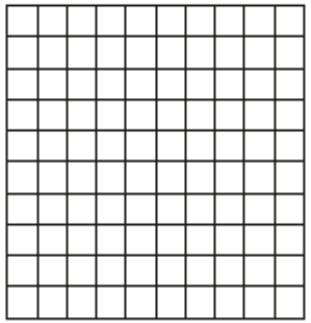
b) Convert the fraction to a decimal. ☐

2 Colour the grid to represent the fraction and the decimal.

a) $\frac{7}{100}$



b) 0.17



3 What fractions and decimals do the counters represent?

a) 

fraction = ☐ decimal = ☐

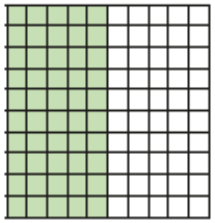
b) 

fraction = ☐ decimal = ☐

c) 

fraction = ☐ decimal = ☐

4 Amir has coloured part of a hundred square.



a) What fraction is represented by the coloured squares? $\frac{\square}{100}$

b) Write this fraction in a different way. ☐

c) Write the fraction as a decimal. ☐

White Rose Home Learning. Today's focus is: Decimals as fractions (1). The supporting video can be found here: https://vimeo.com/519553917

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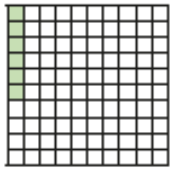
5 Huan says he has coloured 0.6 of the hundred square.



Explain the mistake that Huan has made.

_____

_____

6 Write <, > or = to complete the statements.

a) 0.4 ◯ $\frac{40}{100}$

b) 0.02 ◯ $\frac{20}{100}$

c) 0.6 ◯ $\frac{6}{10}$

d) 0.5 ◯ $\frac{5}{100}$

e) 0.88 ◯ $\frac{88}{100}$

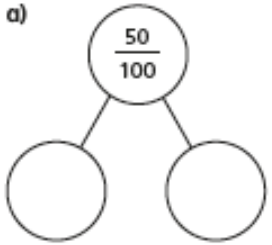
f) 0.88 ◯ $\frac{89}{100}$

7 Complete the table.

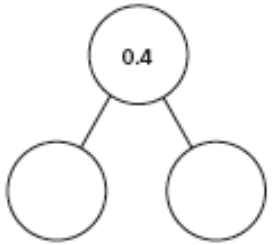
Fifths	Tenths	Decimals
$\frac{1}{5}$	$\frac{\square}{10}$	0.2
$\frac{\square}{5}$	$\frac{4}{10}$	
		0.6
$\frac{4}{5}$	$\frac{8}{\square}$	

8 Complete the part-whole models using fractions or decimals.

a)

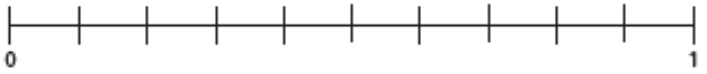


b)



Compare answers with a partner.

9 Here is a number line.

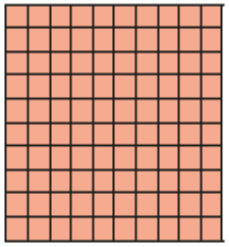


0.3	0.75	0.15	1.0

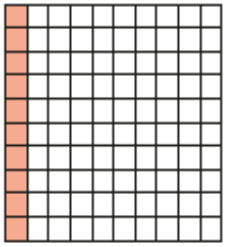
Draw arrows from the numbers to show their place on the line.

Decimals as fractions (2)

1 This grid represents 1

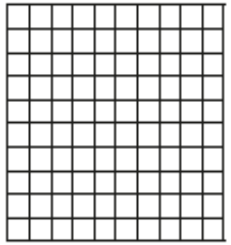


This grid represents 0.1 or $\frac{10}{100}$ or $\frac{1}{10}$

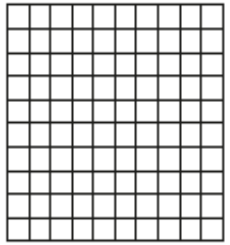


Colour the hundred squares to represent the fractions.

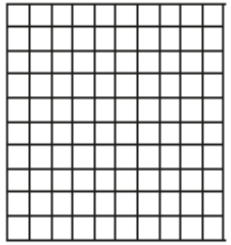
a) $\frac{2}{100}$



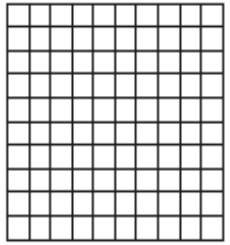
c) $\frac{20}{100}$



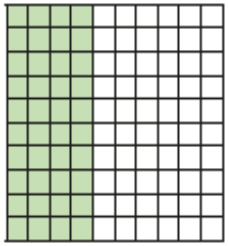
b) $\frac{2}{10}$



d) $\frac{90}{100}$



2 Complete the numbers to show how much of the square is shaded.



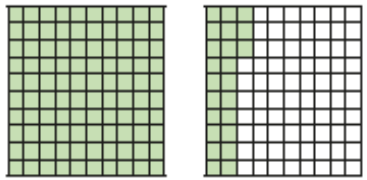
$\frac{\square}{100}$

$\frac{\square}{10}$

0.__

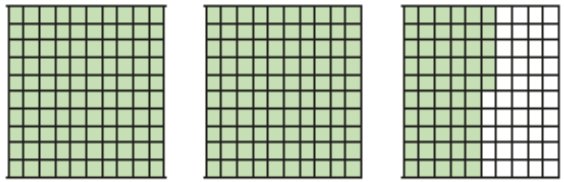
3 What fractions and decimals are represented?

a)



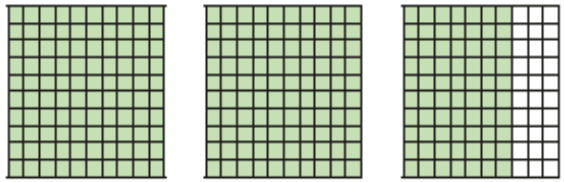
$1\frac{23}{100} = \square$

b)



$\square\ \frac{\square}{100} = \square$

c)



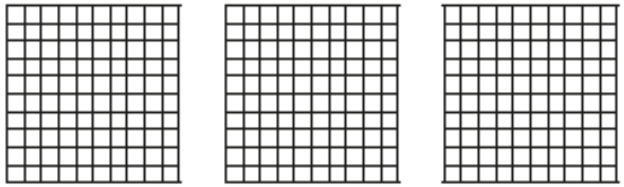
$\square\ \frac{\square}{10} = \square$

White Rose Home Learning. Today's focus is: Decimals as fractions (2). The supporting video can be found here: https://vimeo.com/519555223

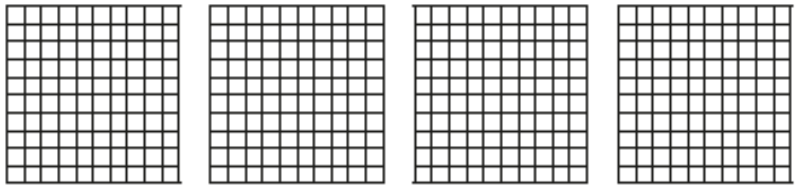
REMOTE & IN-SCHOOL LEARNING - MATHS 20/04/21

4

a) Represent 2.15

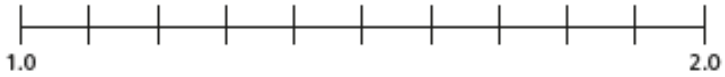


b) Represent $3\frac{7}{10}$



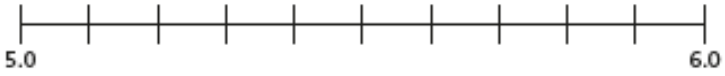
5 a) Label the number line with the decimals.

1.3	1.6	1.85	1.98



b) Label the number line with the fractions.

$5\frac{1}{10}$	$5\frac{1}{2}$	$5\frac{73}{100}$	$\frac{590}{100}$



6 Complete the table.

Decimal	Decimal (expanded form)	Fraction	Fraction (expanded form)	In words
2.13	2 + 0.1 + 0.03	$2\frac{13}{100}$	$2 + \frac{1}{10} + \frac{3}{100}$	2 ones, 1 tenth and 3 hundredths
4.37		$4\frac{\square}{100}$		
	5 + 0.6 + 0.02			
				8 ones and 2 hundredths

7 Write the decimals as fractions.
Give your answer as a mixed number.

a) 32.6 = $\square\ \frac{\square}{10}$

b) 2.03 = $\square\ \frac{\square}{100}$

c) 13.08 = $\square\ \frac{\square}{100}$

d) 3.98 = $\square\ \frac{\square}{100}$

8 Use the digits 3, 4 and 5 to complete the decimal number.

$\square\ \square . 0 \square$

How many different numbers can you make?

Understand thousandths

1 Tommy is using base 10 to represent decimals.

He uses  to represent 1 whole.

He uses  to represent $\frac{1}{10}$ or 0.1

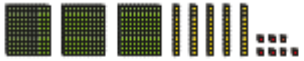
He uses to represent $\frac{1}{100}$ or 0.01

He uses to represent $\frac{1}{1000}$ or 0.001

What decimals are represented?

a) 

b) 

c) 

2 a) Represent each number using base 10

0.512 1.352 2.003

b) Use your representations to help you complete the statements.

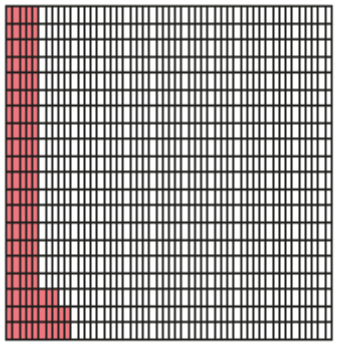
0.512 = 0.5 + 0.01 + ☐

1.352 = 1 + ☐ + ☐ + ☐

2.003 = _____

3 Here is a thousand square.

Part of the square has been coloured.



a) Why do you think it is called a thousand square?

_____

b) What fraction of the square has been coloured? $\frac{\square}{1000}$

c) Write the fraction as a decimal. ☐

White Rose Home Learning. Today's focus is: Understand thousandths. The supporting video can be found here: https://vimeo.com/519979817

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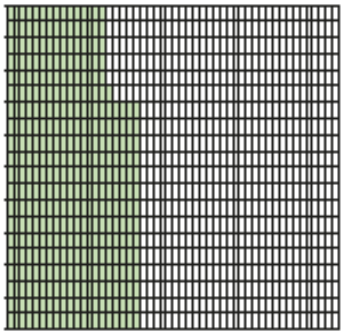
4 What fraction of each square has been shaded?

Write each number as a fraction and as a decimal.

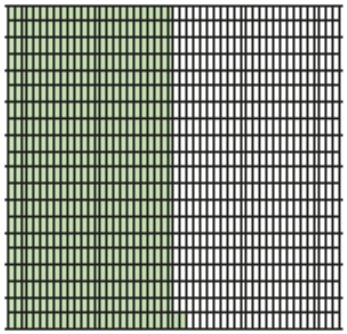
a)



fraction = ☐

decimal = ☐

b)

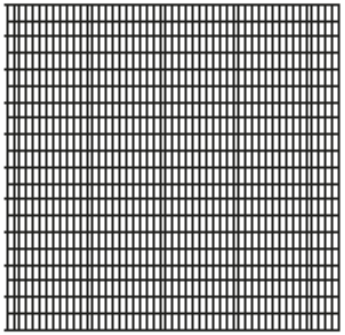


fraction = ☐

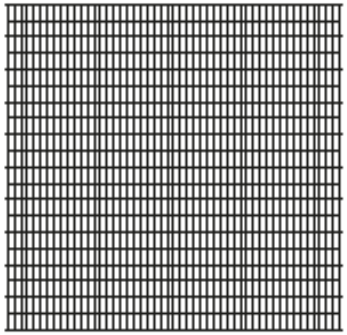
decimal = ☐

5 Colour the grids to represent the fraction and decimal.

a) $\frac{73}{1000}$



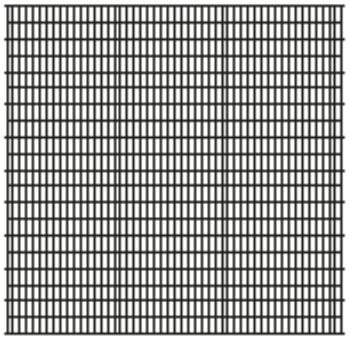
b) 0.302



6 Represent these numbers on a place value chart.

a) 1.372 b) 0.091 c) 3.542

7 Show that $\frac{400}{1000}$ is the same as 0.4



8 Write the numbers represented by the place value charts.

a)

Ones	Tenths	Hundredths	Thousandths
1 1 1 1	0.1 0.1	0.01 0.01 0.01 0.01 0.01 0.01 0.01	0.001 0.001 0.001 0.001 0.001 0.001

☐

b)

Ones	Tenths	Hundredths	Thousandths
	0.1 0.1 0.1 0.1 0.1		0.001 0.001 0.001 0.001

☐

Thousandths as decimals

1 Represent the numbers on a place value chart.

Write the decimal.

a) 5 ones, 7 tenths, 0 hundredths and 2 thousandths

b) 0 ones, 6 tenths, 2 hundredths and 9 thousandths

c) 7 ones, 0 tenths, 1 hundredth and 3 thousandths

d) 5 ones, 6 tenths, 7 hundredths and 0 thousandths

e) What would these numbers be as fractions?

Talk about it with a partner.

2 Write the mixed numbers as decimals.

a) $4\frac{514}{1000} =$ ☐

b) $6\frac{325}{1000} =$ ☐

c) $2\frac{250}{1000} =$ ☐

d) $1\frac{50}{1000} =$ ☐

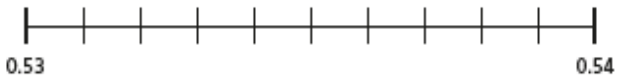
e) $4\frac{5}{1000} =$ ☐

f) $\frac{2}{1000} =$ ☐

3 Mo is placing decimal numbers on a number line.

Draw an arrow from each number to its position on the number line.

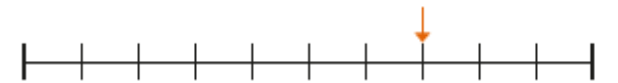
0.532	0.535	0.538	$\frac{539}{1000}$



4 What number is the arrow pointing to?

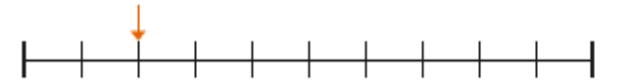
Write each number as a decimal and as a fraction.

a)



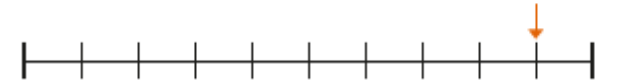
decimal = ☐ fraction = ☐/1000

b)



decimal = ☐ fraction = ☐/1000

c)



decimal = ☐ fraction = ☐/1000

White Rose Home Learning. Today's focus is: Thousandths as decimals. The supporting video can be found here: https://vimeo.com/520007456

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5 Complete the table to continue the pattern.

$\frac{57}{1000}$	$\frac{58}{1000}$	$\frac{\square}{1000}$	$\frac{\square}{1000}$				
0.057							

6 Write a decimal to complete the statement.

a) $\frac{7}{10} + \frac{3}{100} + \frac{9}{1000} = \square$

b) $\frac{9}{10} + \frac{7}{100} + \frac{1}{1000} = \square$

c) $\frac{7}{100} + \frac{9}{10} + \frac{1}{1000} = \square$

d) $\frac{2}{10} + \frac{7}{1000} = \square$

e) $\frac{6}{100} + \frac{3}{1000} = \square$

7 Eva has 12 plain counters.

She makes numbers using the place value chart.

1	$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$

a) List five numbers that Eva could make.

b) What is the greatest and smallest number she can make with all 12 counters?

greatest ☐ smallest ☐

8 Whitney is representing 0.536

$$\frac{50}{100} + \frac{18}{1000} + \frac{18}{1000}$$

a) Is Whitney correct? _____

Explain your answer.

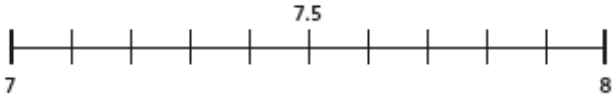
b) Partition Whitney's number another way.

Rounding decimals

1 Show the position of each number on the number line.

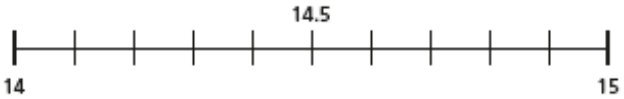
Use the number line to round these decimals to the nearest whole number.

a) 7.2



The nearest whole number is ☐

b) 14.8



The nearest whole number is ☐

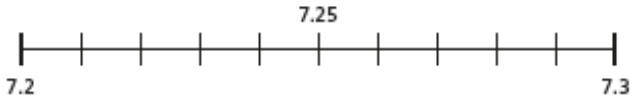
c) 6.5

The nearest whole number is ☐

Explain to a partner how to round decimal numbers to the nearest whole number.

2 Use the number line to round these decimal numbers to the nearest tenth and the nearest whole number.

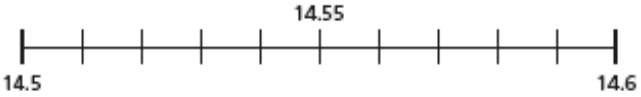
a) 7.23



The nearest tenth is ☐

The nearest whole number is ☐

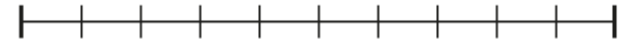
b) 14.56



The nearest tenth is ☐

The nearest whole number is ☐

c) 6.45



The nearest tenth is ☐

The nearest whole number is ☐

Explain to a partner how to round decimal numbers to one decimal place.

White Rose Home Learning. Today's focus is: Rounding decimals. The supporting video can be found here: https://vimeo.com/521879754

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3 a) When rounding to the nearest tenth, how many digits will there be after the decimal point? ☐

b) Round each number to one decimal place.

1.33	☐	4.03	☐
1.34	☐	4.04	☐
1.35	☐	4.05	☐
1.36	☐	4.06	☐
1.37	☐	4.07	☐

4 Round each number to the nearest tenth.

a) 4.21	☐	d) 11.86	☐	g) 12.92	☐
b) 8.09	☐	e) 5.67	☐	h) 10.65	☐
c) 4.84	☐	f) 0.15	☐		

5 Circle each decimal that rounds to 6.2

6.32 **6.23** **6.27** **6.17** **6.12** **6.25**

Explain your reasoning.

_____

_____

6 Here are the weights in kilograms of some parcels.

3.48 kg 1.42 kg 10.65 kg 1.03 kg

a) Round the weight of each parcel to 1 decimal place.

☐ kg ☐ kg ☐ kg ☐ kg

b) The weight of each parcel has been rounded to the nearest 100g.

Is this true or false? _____

Talk about it with a partner.

7 Amir is thinking of a number.

Rounded to the nearest whole his number is 5

Rounded to the nearest tenth his number is 4.8

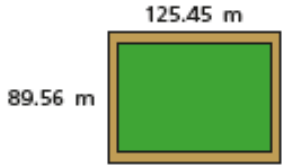
Write at least four different numbers that Amir could be thinking of.

_____

_____

8 A farmer is building a new fence for her sheep field.

Here are the measurements.



She wants to build a fence around the whole field.

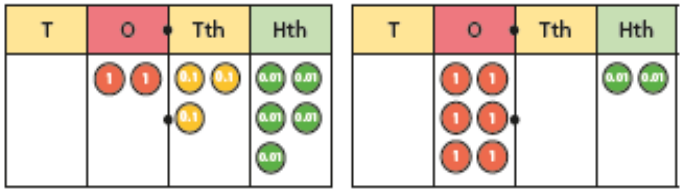
Estimate how much fencing you think she will need.

Talk about your estimate with a partner.

Order and compare decimals

1 Which number is greater?

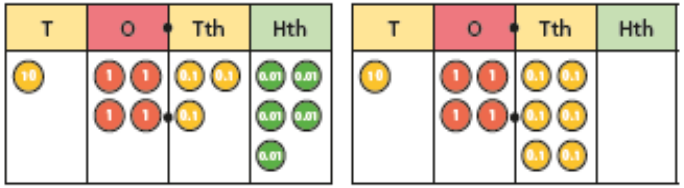
Tick your answer.



Explain your answer.

2 Which is the smaller number?

Tick your answer.



Explain your answer.

3 Use place value counters to make each of the numbers.

4.13	4.08	5.1

a) Which is the greatest number?

b) Which is the smallest number?

How do you know?

4 Here are some numbers in a place value chart.

Ones	Tenths	Hundredths	Thousandths
3	2	3	4
3	1	6	
3	2	0	8
3	1	4	5

Write the numbers in order, starting with the greatest.

5 Mo, Amir, Ron, Teddy and Jack are measuring their heights with a metre rule.

Mo	Amir	Ron	Teddy	Jack
				
1.35 m	1.53 m	1.32 m	1.3 m	1.5 m

Write the names and heights of the children in order from shortest to tallest.

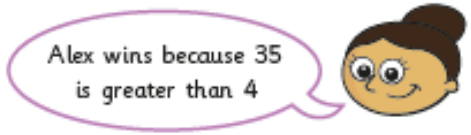
Name	Height

White Rose Home Learning. Today's focus is: Order and compare decimals. The supporting video can be found here: https://vimeo.com/522240829

REMOTE & IN-SCHOOL LEARNING - MATHS 26/04/21

6 Alex and Dora are competing in the long jump.

Alex jumps 1.35 metres and Dora jumps 1.4 metres.



a) Is Dora correct? _____

Talk about it with a partner.

b) Kim joins in the competition.

What is the shortest distance she can jump to go into the lead?

_____

7 Write the numbers in ascending order.

a) 0.45 0.654 0.546 0.405

☐ ☐ ☐ ☐

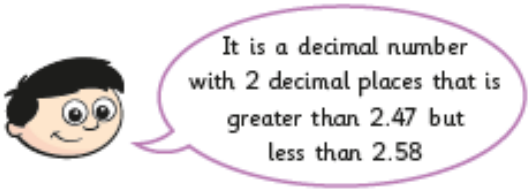
b) 7.2 kg 7.212 kg 7.21 kg

☐ ☐ ☐

c) 25.391 25.309 25.093 25.193

☐ ☐ ☐ ☐

8 Dexter is thinking of a number.



What possible numbers could Dexter be thinking of?

_____

_____

9 Tick the numbers that are equal to 2.5

Circle the numbers that are greater than 2.5

You will need to convert the mixed numbers to decimal numbers first.

2.05	$2\frac{5}{10}$	$2\frac{1}{2}$
$2\frac{5}{100}$	2.53	$2\frac{3}{5}$
2.501	$2\frac{80}{100}$	$2\frac{3}{10}$