



Week 2

Key Instant Recall Facts

Year 6 – Spring 1

I can convert between decimals, fractions and percentages.

$$\frac{1}{2} = 0.5$$

$$\frac{1}{4} = 0.25$$

$$\frac{3}{4} = 0.75$$

$$\frac{1}{10} = 0.1$$

$$\frac{1}{5} = 0.2$$

$$\frac{3}{5} = 0.6$$

$$\frac{9}{10} = 0.9$$

$$\frac{1}{100} = 0.01$$

$$\frac{7}{100} = 0.07$$

$$\frac{21}{100} = 0.21$$

$$\frac{75}{100} = 0.75$$

$$\frac{99}{100} = 0.99$$

Key Vocabulary

How many **tenths** is 0.8?

How many **hundredths** is 0.12?

Write 0.75 as a **fraction**?

Write $\frac{1}{4}$ as a **decimal**?

Thurs

Write the missing equivalent fraction (in its simplest form), decimal or percentage as needed.

$0.7 =$	$\frac{1}{8} =$	$75\% =$
$20\% =$	$0.01 =$	$\frac{2}{3} =$

RECALL

F	D	P
$\frac{1}{10}$		
$\frac{1}{5}$		
$\frac{1}{4}$		

F	D	P
$\frac{3}{10}$		
$\frac{4}{5}$		
$\frac{3}{4}$		

RECALL

F	D	P
$\frac{1}{10}$	0.1	10%
$\frac{1}{5}$	0.2	20%
$\frac{1}{4}$	0.25	25%

F	D	P
$\frac{3}{10}$	0.3	30%
$\frac{4}{5}$	0.8	80%
$\frac{3}{4}$	0.75	75%

L.O. -TO FIND EQUIVALENT FRACTIONS, DECIMALS AND PERCENTAGES

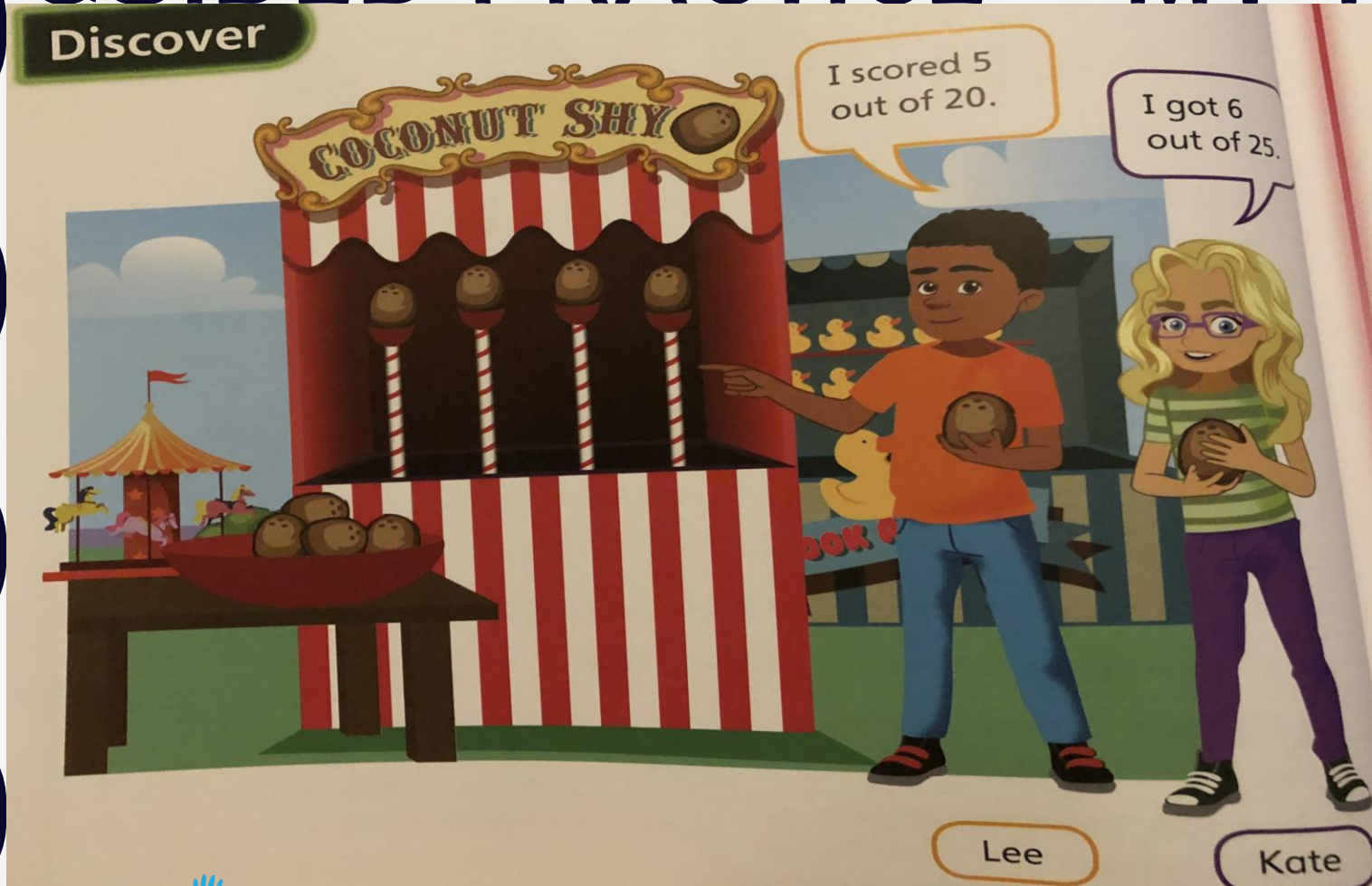
SOME WILL EVEN: Identify equivalence of ALL FDP and use to problem solve.

SOME WILL: Identify equivalence of unit FDP.
(whole, half, quarters, tenths, fifths)

MOST WILL: Use understanding of place value to help convert.

ALL WILL: Use number lines and 100 square to help find equivalents.

GUIDED PRACTICE – MY TURN



- 1) Write Lee's score and Kate's score as fractions. Who was more accurate at Coconut Shy?
- 2) Write a fraction that can be found between both scores?

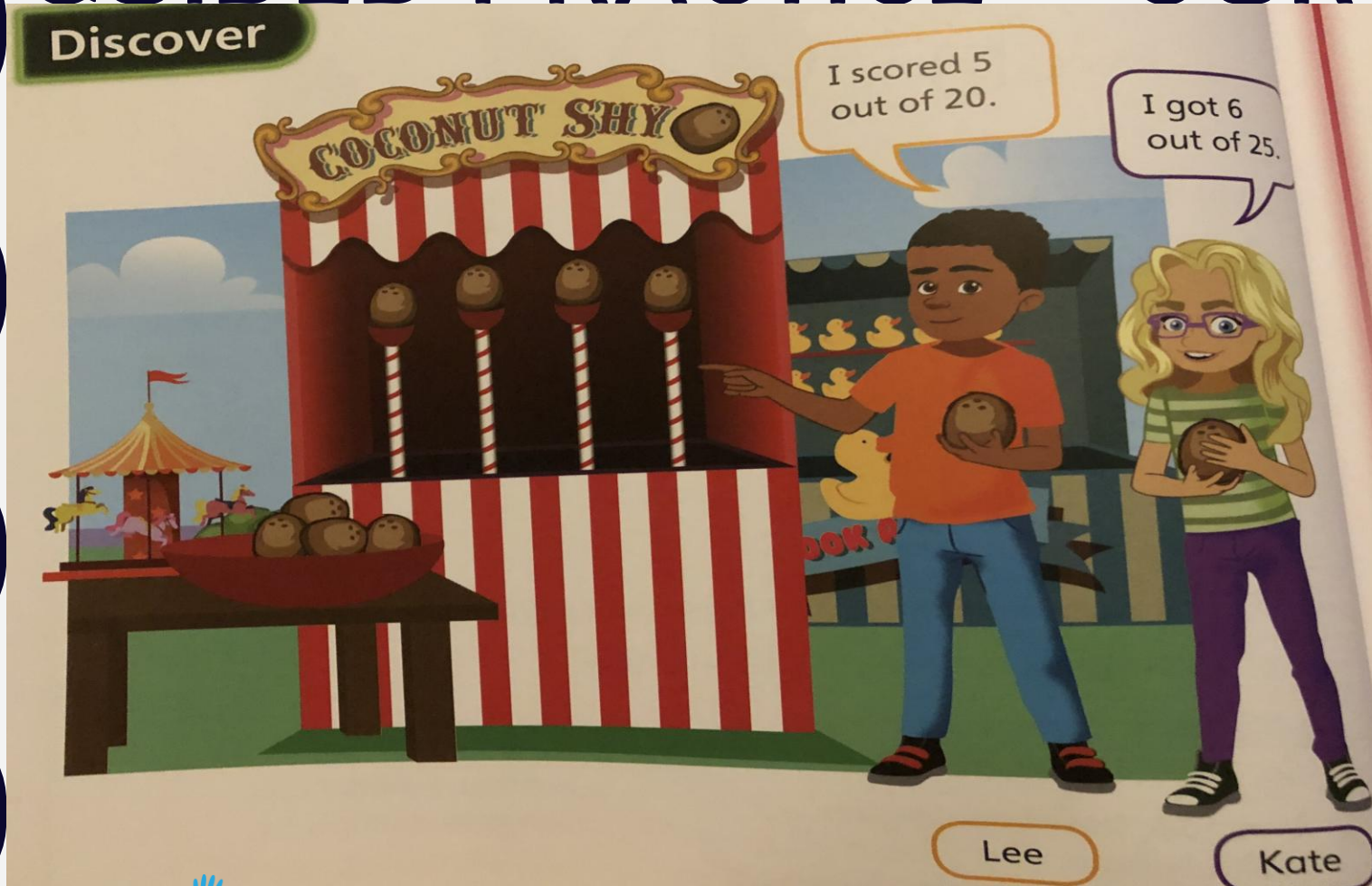
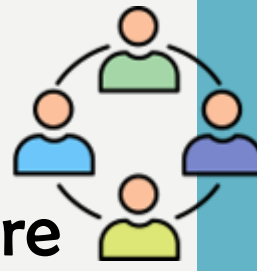
help

Convert your fractions into LCM to help you compare.



Kate says she was better at Coconut shy because her percentage success was better. Is she right? Prove it!

GUIDED PRACTICE – OUR TURN



1) Write Lee's score and Kate's score as fractions. Who was more accurate at Coconut Shy?

2) Write a fraction that can be found between both scores?

help

Convert your fractions into LCM to help you compare.



Kate says she was better at Coconut shy because her percentage success was better. Is she right? Prove it!

GUIDED PRACTICE – YOUR TURN



Discover



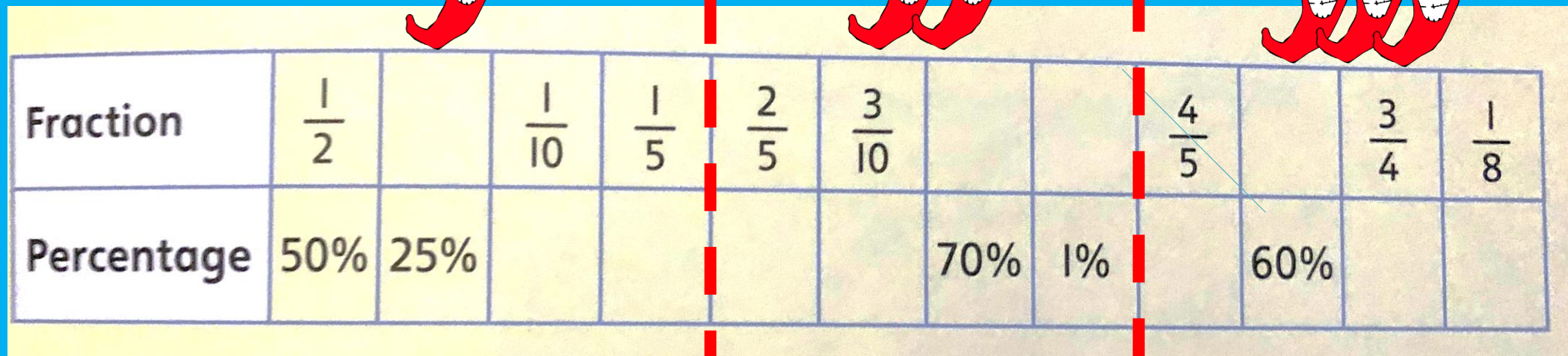
- 1) Write Lee's score and Kate's score as fractions. Who was more accurate at Coconut Shy?
- 2) Write a fraction that can be found between both scores?

help

Convert your fractions into LCM to help you compare.



Kate says she was much better at Coconut shy this time . Using her percentage success, is she right? Prove it!



Fraction	$\frac{1}{2}$		$\frac{1}{10}$	$\frac{1}{5}$	$\frac{2}{5}$	$\frac{3}{10}$			$\frac{4}{5}$		$\frac{3}{4}$	$\frac{1}{8}$
Percentage	50%	25%					70%	1%		60%		

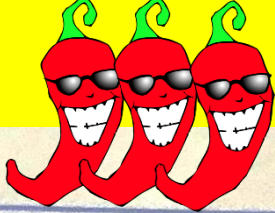
Extra rocket challenge:- Can you add in a decimals row?



Find the matching pairs of fractions and percentages.

$\frac{1}{4}$	1%	$\frac{1}{2}$	10%	$\frac{1}{5}$	20%	$\frac{3}{4}$
75%	$\frac{1}{100}$	25%	$\frac{1}{10}$	50%	$\frac{1}{8}$	12.5%

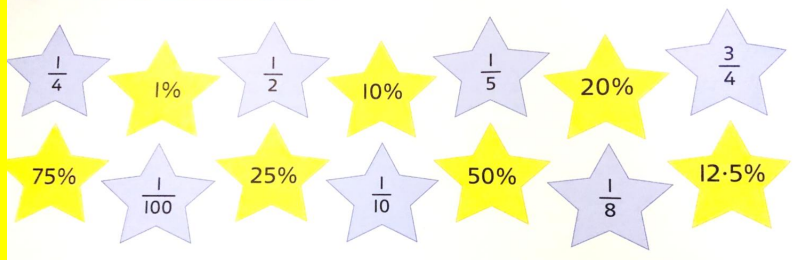




Fraction	$\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{2}{5}$	$\frac{3}{10}$	$\frac{7}{10}$	$\frac{1}{100}$	$\frac{4}{5}$	$\frac{3}{5}$	$\frac{3}{4}$	$\frac{1}{8}$
Percentage	50%	25%	10%	20%	40%	30%	70%	1%	80%	60%	75%	12.5%

Extra rocket challenge:- Can you add in a decimals row?

Find the matching pairs of fractions and percentages.



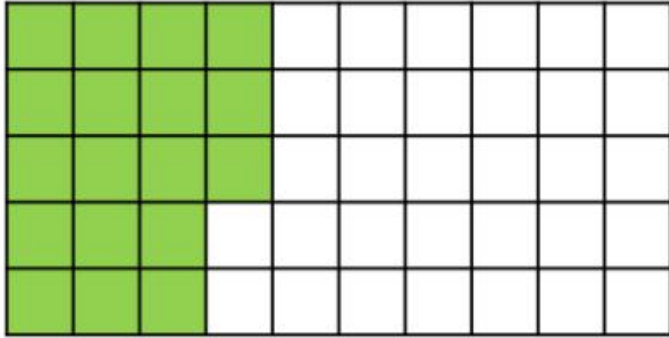
- $\frac{1}{4} \rightarrow 25\%$
- $\frac{1}{2} \rightarrow 50\%$
- $\frac{1}{5} \rightarrow 20\%$
- $\frac{3}{4} \rightarrow 75\%$
- $\frac{1}{100} \rightarrow 1\%$
- $\frac{1}{10} \rightarrow 10\%$
- $\frac{1}{8} \rightarrow 12.5\%$





DIVE DEEPER 1

1)



Amir thinks that 18% of the grid has been shaded.

Dora thinks that 36% of the grid has been shaded.

Who do you agree with?

Explain your reasoning.

2)

Which of these are equivalent to 60%?

$$\frac{60}{100}$$

$$\frac{6}{100}$$

$$0.06$$

$$\frac{3}{5}$$

$$\frac{3}{50}$$

$$0.6$$

3)

Amir says 0.3 is less than 12% because 3 is less than 12

Explain why Amir is wrong.

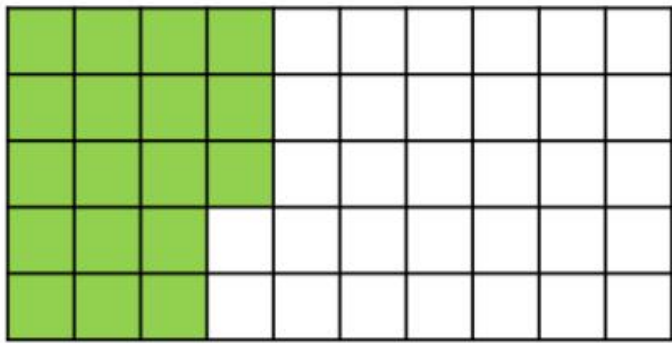
4)

In a Maths test, Tommy answered 62% of the questions correctly.

Rosie answered $\frac{3}{5}$ of the questions correctly.

Who answered more questions correctly?

Explain your answer.



Amir thinks that 18% of the grid has been shaded.

Dora thinks that 36% of the grid has been shaded.

Who do you agree with?

Explain your reasoning.

Dora is correct

because $\frac{18}{50} = \frac{36}{100}$

Which of these are equivalent to 60%?

$$\frac{60}{100}$$

$$\frac{6}{100}$$

0.06

$$\frac{3}{5}$$

$$\frac{3}{50}$$

0.6

Amir says 0.3 is less than 12% because 3 is less than 12

Explain why Amir is wrong.

Amir is wrong because 0.3 is equivalent to 30%

In a Maths test, Tommy answered 62% of the questions correctly.

Rosie answered $\frac{3}{5}$ of the questions correctly.

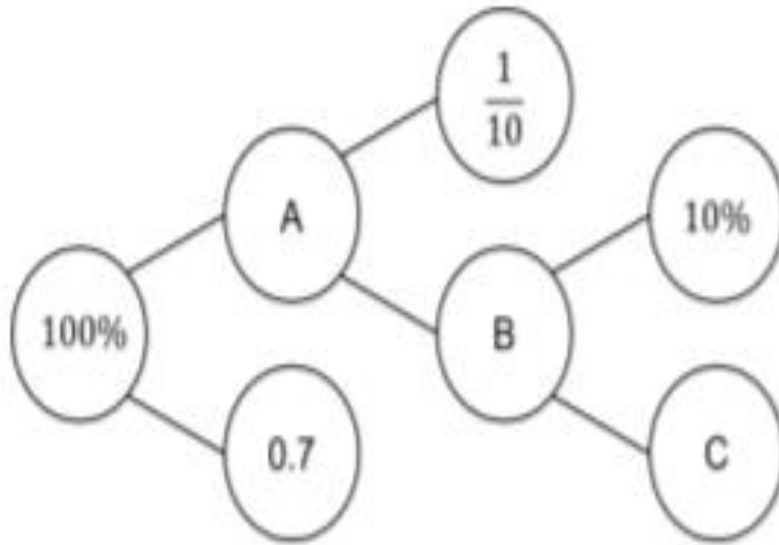
Who answered more questions correctly?

Explain your answer.

Tommy answered more questions correctly because $\frac{3}{5}$ as a percentage is 60% and this is less than 62%



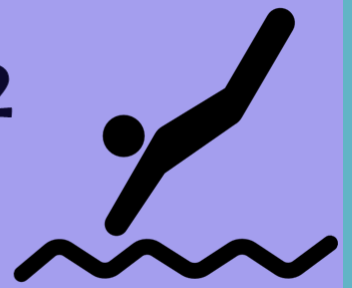
Complete the part-whole model.
How many different ways can you
complete it?



Can you create your own version with
different values?

5)

DIVE DEEPER 2

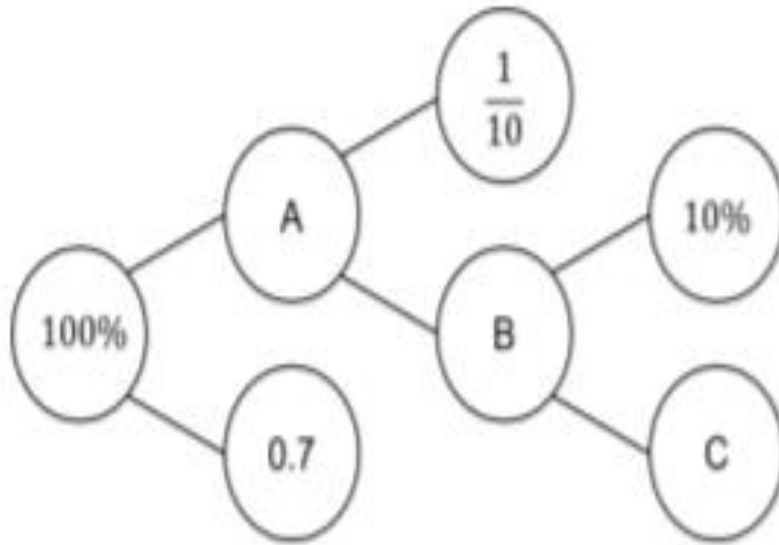


How many different fractions can you
make using the digit cards?



How many of the fractions can you
convert into decimals and percentages?

Complete the part-whole model.
How many different ways can you complete it?



A = 0.3, 30% or $\frac{3}{10}$

B = 0.2, 20%, $\frac{2}{10}$ or $\frac{1}{5}$

C = 0.1, 10% or $\frac{1}{10}$

Can you create your own version with different values?



How many different fractions can you make using the digit cards?



How many of the fractions can you convert into decimals and percentages?

Possible answers:

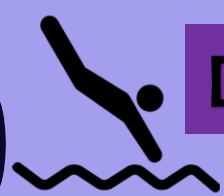
Children make a range of fractions.

They should be able to convert

$\frac{1}{2}$, $\frac{1}{4}$, $\frac{2}{4}$, $\frac{3}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{3}{5}$

and $\frac{4}{5}$ into decimals and percentages.





DIVE DEEPER 3



1

True or False?

$$\frac{1}{25} = 0.25$$

$$\frac{1}{10} = 0.10$$

$$\frac{1}{3} = 0.3$$

$$\frac{1}{20} = 0.05$$

$$\frac{1}{12} = 0.12$$

$$\frac{4}{5} = 0.8$$



2

Odd One Out

0.6

0.35

$\frac{3}{5}$

$\frac{1}{8}$

0.08

$\frac{8}{100}$

$\frac{1}{25}$

0.04

0.025

$\frac{4}{100}$



3

Small Difference Questions

F = fraction D = decimal

F	D
	0.2
$\frac{3}{5}$	
$\frac{3}{50}$	

F	D
	0.25
$\frac{1}{8}$	
$\frac{3}{8}$	

F	D
	0.05
$\frac{1}{25}$	
$\frac{6}{25}$	

Extend: Add another example to each sequence.



Explain

Every fraction is equivalent to only one decimal. However, each decimal is equivalent to more than one fraction.

Give examples to prove that this statement is true.



DIVE DEEPER 3



True or False? True examples: $\frac{1}{10} = 0.10$ (the 0 in the hundredths column isn't needed as it's not a place holder) $\frac{1}{20} = 0.05$ $\frac{4}{5} = 0.8$

Odd One Out: 0.35 $\frac{1}{8}$ 0.025

Small Difference Questions: Left table: $\frac{1}{5} = 0.2$ $\frac{3}{5} = 0.6$ $\frac{3}{50} = 0.06$

Middle table: $\frac{1}{4} = 0.25$ $\frac{1}{8} = 0.125$ $\frac{3}{8} = 0.375$

Right table: $\frac{1}{20} = 0.05$ $\frac{1}{25} = 0.04$ $\frac{6}{25} = 0.24$

Explain: Example answer: True because the same number can be represented by equivalent fractions, for example $\frac{1}{4} = \frac{25}{100} = 0.25$ but there are no 'equivalent decimals'.

Doughnut Percents

Age 7 to 14

Challenge Level ★★



What are you aiming to do?

Every member of the team must end up with a set of four dominoes which join together to form a "doughnut" where touching ends have equal value. For example:

0.8	40%	$\frac{2}{5}$
80%		$\frac{1}{4}$
0.3	30%	25%