Colin and Coco's Deliberate Practice

Year 5 Unit 9

Fractions, Decimals and Percentages

Answers

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Contents

This pack of deliberate practice is designed to be used flexibly to secure the manageable steps of this unit.
The table below indicates which activities are linked to which manageable steps.

	Do It	Challenge It	Play It
Identify equivalent fractions represented visually			1
Compare fractions whose denominators are multiples of the same number	1		
Order fractions whose denominators are multiples of the same number		1	
Represent tenths and hundredths			1
Write a number less than1 with one decimal place as a fraction	2		
Write a number less than 1 with two decimal places as a fraction			2
Write a number less than 1 with three decimal places as a fraction		2	
Understand that per cent relates to number of parts per hundred		3	
Write any percentage as a fraction with a denominator of 100		3	
Write any percentage as a decimal	3		
Know percentage equivalents of 1/2, 1/4, 1/5, 2/5, 4/5			3
Establish percentage equivalents of fractions with a denominator of multiples of 10	4		
Establish percentage equivalents of fractions with a denominator of multiples of 25		4	

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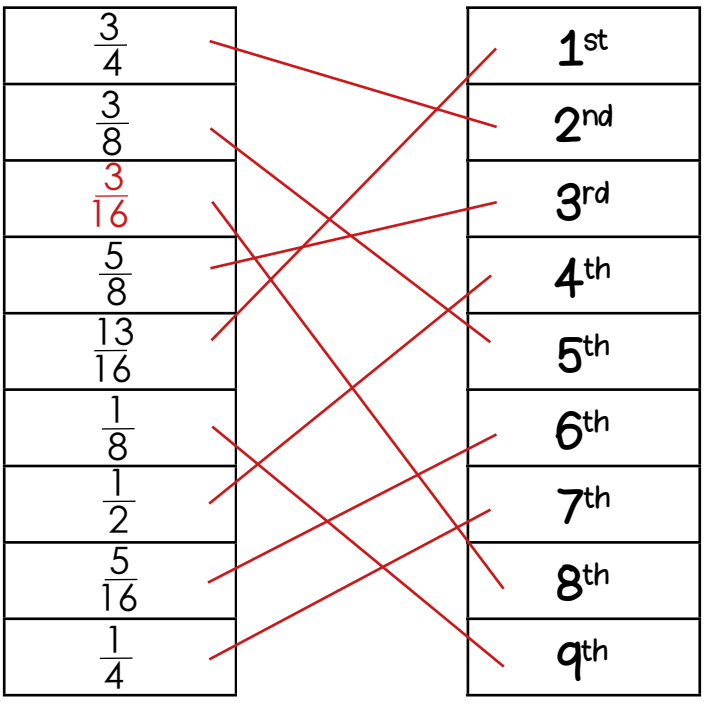
Do It 1

Insert <, > or =

$\frac{1}{4}$	<	$\frac{3}{8}$	$\frac{1}{2}$	<	$\frac{4}{6}$	$\frac{2}{4}$	>	$\frac{9}{20}$
$\frac{2}{5}$	>	$\frac{3}{10}$	$\frac{1}{3}$	<	$\frac{4}{9}$	$\frac{2}{3}$	>	$\frac{7}{12}$
$\frac{3}{6}$	>	$\frac{1}{3}$	$\frac{2}{3}$	>	$\frac{5}{9}$	$\frac{5}{6}$	>	$\frac{9}{12}$
$\frac{3}{4}$	>	$\frac{5}{8}$	$\frac{3}{5}$	>	$\frac{7}{15}$	$\frac{3}{4}$	<	$\frac{10}{12}$

Challenge It 1

The fractions are placed in order from largest to smallest.
Match the fractions with the correct place.



Largest

Smallest

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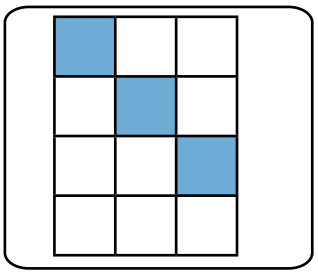
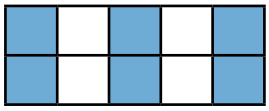
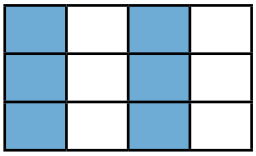
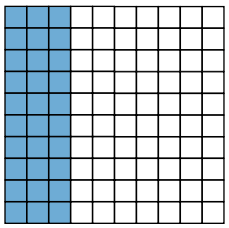
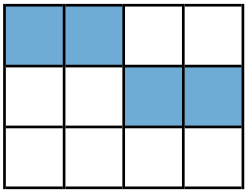
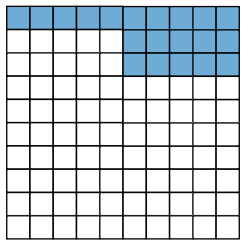
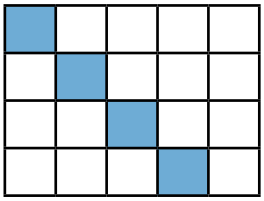
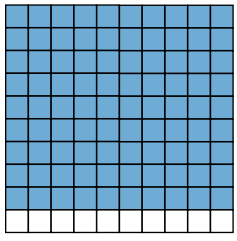
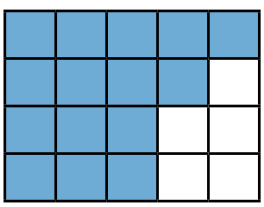
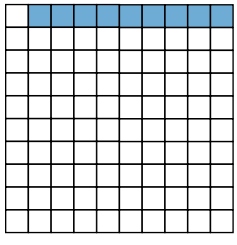
Equivalent Fractions Game

Play It 1

You need:
Fraction cards

To play:
Shuffle and place the cards face down.
Each player picks two cards. If they match, the player keeps the pair and it is the other player's go.
If they do not match, the cards are turned back over and the other player has a go.

To win:
The winner is the player with the most pairs.

$\frac{1}{4}$		$\frac{6}{10}$	
$\frac{1}{2}$		$\frac{3}{10}$	
$\frac{1}{3}$		$\frac{2}{10}$	
$\frac{1}{5}$		$\frac{90}{100}$	
$\frac{3}{4}$		$\frac{9}{100}$	

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Do It 2

Write the decimals as a fraction:

0.2	$\frac{2}{10}$
0.4	$\frac{4}{10}$
0.6	$\frac{6}{10}$
0.8	$\frac{8}{10}$

Write the fractions as a decimal:

$\frac{1}{10}$	0.1
$\frac{3}{10}$	0.3
$\frac{5}{10}$	0.5
$\frac{7}{10}$	0.7

Challenge It 2

Match the fraction with the correct decimal.
Find the missing buddies

$\frac{7}{1000}$	0.71
$\frac{700}{1000}$	0.77
$\frac{701}{1000}$	0.077
$\frac{77}{1000}$	0.071
$\frac{707}{1000}$	0.7
$\frac{710}{1000}$	0.07
$\frac{7}{100}$	0.701
$\frac{71}{1000}$	0.007
$\frac{770}{1000}$	0.707

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Play It 2

Fraction vs Decimal
Which is Greater? Game

You need:
Card set

To play:
All the cards are shuffled and placed face down.
Players take turns to turn over one card each.
The card that has the greatest value wins.
The player wins the pair of cards.

To win:
The winner is the player with the highest number of cards.

$\frac{65}{100}$	0.8	$\frac{7}{100}$	0.67
$\frac{4}{100}$	0.3	$\frac{3}{100}$	0.31
$\frac{10}{100}$	0.01	$\frac{2}{100}$	0.11
$\frac{89}{100}$	0.9	$\frac{9}{100}$	0.98
$\frac{6}{100}$	0.6	$\frac{61}{100}$	0.59
$\frac{77}{100}$	0.7	$\frac{75}{100}$	0.57

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Do It 3

Write the decimal as a %:

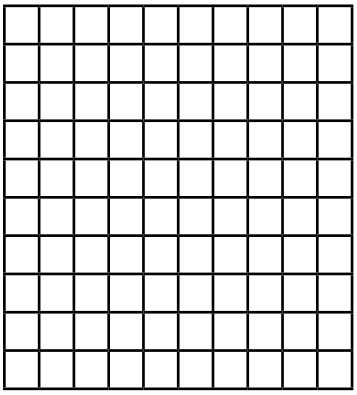
0.03	3 %	0.3	30 %
0.23	23 %	0.5	50 %
0.45	45 %	0.7	70%
0.67	67 %	0.9	90 %

Write the % as a decimal:

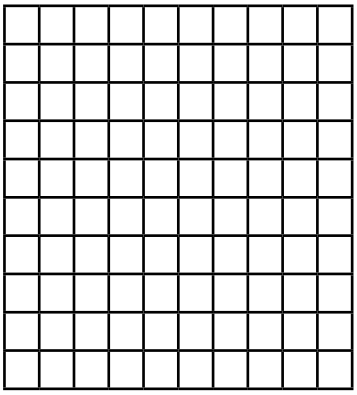
7%	0.07
71%	0.71
17%	0.17
70%	0.7

Challenge It 3

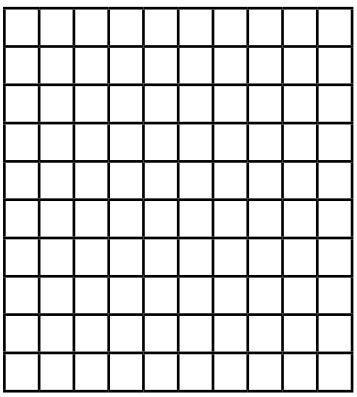
Complete the picture, percentage and fraction using the digits 1, 2, 3, 4, 5, 6, 7 and 8 in different ways



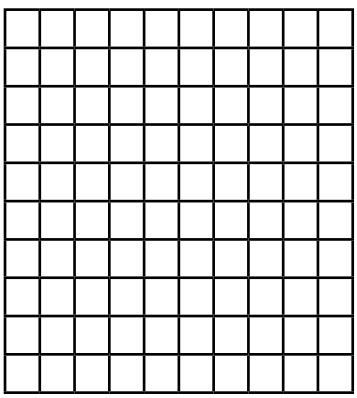
$$\frac{\square\square}{100} = \square\square\,\%$$



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



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



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

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Fraction, Decimal and Percentage Match

Play It 3

You need:
Fraction, decimal and percentage cards

To play:
The cards are mixed up and placed face down.
Player 1 turns over one card.
Player 1 turns over another card.
If the cards are equivalent, player 1 keeps the pair.
If the cards are not equivalent, the cards are turned back face down.
Player 2 turns over two cards to try and find a matching pair.

To win:
The winner is the player with the largest number of matching pairs.

$\frac{1}{2}$	50%
$\frac{1}{4}$	25%
$\frac{1}{5}$	20%
$\frac{2}{5}$	40%
$\frac{4}{5}$	80%

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Do It 4

Write the fraction as a %:

$\frac{1}{10}$	10 %	$\frac{1}{20}$	5 %	$\frac{1}{50}$	0.02
$\frac{3}{10}$	30 %	$\frac{3}{20}$	15 %	$\frac{7}{50}$	0.14
$\frac{5}{10}$	50 %	$\frac{5}{20}$	25%	$\frac{12}{50}$	0.24
$\frac{7}{10}$	70 %	$\frac{11}{20}$	55 %	$\frac{12}{40}$	0.3(0)

Challenge It 4

Find the missing digits.
Solve each statement in several different ways.

$\frac{\boxed{2}}{25} = \boxed{8}\,\%$ $\qquad$ $\frac{\boxed{3}}{50} = \boxed{6}\,\%$

$$\frac{\boxed{7}}{\boxed{5}0} = \boxed{1}\boxed{4}\,\%$$

Solve all the statements together using the digits
1, 2, 3, 4, 5, 6, 7 and 8 once.

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Fraction Percentage Match

Play It 3

You need:
Dice 1 – 6
1 – 100% grid each

To play:
Each player has a 1 – 100% grid. The aim of the game is to try and shade all 100 squares.
Players take turns to roll the dice and decide if they wish to create a fraction with a denominator of 10 or 25.
They convert this fraction to a % and then shade the corresponding number of squares on the grid.

For example, if I roll a 4 I can create the fraction $\frac{4}{10}$ (40%) or $\frac{4}{25}$ (16%). I can therefore shade 40 squares or 16 squares.

Players continue taking turns until no player can go.

To win:
The winner is the player with the largest number of squares shaded.

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