



Colin and Coco's Deliberate Practice

Year 4 Unit 11 **Answers**

Decimals





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
Recognise that hundredths arise from dividing a number (or object) into one hundred equal parts and dividing tenths by ten	1		
Read and represent a number with 2 decimal places		1	
Count up in hundredths			1
Count down in hundredths			1
Divide a one-digit number by 100	2		
Divide a two-digit number by 10	2	2	
Divide a two-digit number by 100	2	2	2
Compare numbers with 1 dp	3		
Compare numbers with 2dp			3
Order numbers with the same number of decimal places		3	
Round numbers with 1dp to nearest whole number	4		
Convert from pence to pounds		4	
Convert from pounds to pence			4



Divide each of the following by 100 and write as fractions and as decimals.

$$6 \quad \boxed{\frac{6}{100}} = \boxed{0.06}$$

$$9 \quad \boxed{\frac{9}{100}} = \boxed{0.09}$$

$$14 \quad \boxed{\frac{14}{100}} = \boxed{0.14}$$

$$32 \quad \boxed{\frac{32}{100}} = \boxed{0.32}$$

$$250 \quad \boxed{\frac{250}{100}} = \boxed{2.5}$$

$$125 \quad \boxed{\frac{125}{100}} = \boxed{1.25}$$

Divide each of the following by 10 and write as fractions and as decimals.

$$8 \text{ tenths} \quad \boxed{\frac{8}{100}} = \boxed{0.08}$$

$$1 \text{ tenth} \quad \boxed{\frac{1}{100}} = \boxed{0.01}$$

$$4 \text{ tenths} \quad \boxed{\frac{4}{100}} = \boxed{0.04}$$

$$6 \text{ tenths} \quad \boxed{\frac{6}{100}} = \boxed{0.06}$$

$$9 \text{ tenths} \quad \boxed{\frac{9}{100}} = \boxed{0.09}$$

$$2 \text{ tenths} \quad \boxed{\frac{2}{100}} = \boxed{0.02}$$

Do It 1

Challenge It 1

Use a combination of 4 Place Value Counters to create different numbers with two decimal places.

You are only allowed to use a maximum of two counters with the same value in each number.



Write each number using words and numerals.

for example: 2.02

two point zero two,

two ones, zero tenths and two hundredths

Investigate all possibilities.



Counting in Hundredths Game

You need:

0 - 9 dice

To play:

Take turns to throw the dice twice and make a number with two decimal places.
The first throw is the tenths digit and the second throw is the hundredths digit.

Say whether you are going to count up or down in hundredths aloud.

Count 5 steps of one hundredth from your decimal number.

Count out loud.

You score the number of hundredths in the last number you say.

For example:

Player 1: Throws 4 and 7 and makes 0.47

States they will count up.

Counts 0.47, 0.48, 0.49, 0.5, 0.51, 0.52

Scores 2

To win:

The winner is the player with the highest total score after 5 goes each.



Do It 2

Calculate:

$8 \div 100 = \boxed{0.08}$

$37 \div 100 = \boxed{0.37}$

$\boxed{0.74} = 74 \div 100$

$5 \div 100 = \boxed{0.05}$

$53 \div 100 = \boxed{0.53}$

$\boxed{0.85} = 85 \div 100$

$1 \div 100 = \boxed{0.01}$

$15 \div 10 = \boxed{1.5}$

$\boxed{6.3} = 63 \div 10$

$15 \div 100 = \boxed{0.15}$

$42 \div 10 = \boxed{4.2}$

$\boxed{8.1} = 81 \div 10$

Match the calculation with the answer.
Fill in the missing buddies.

Challenge It 2

$43 \div 100$	8.5
$34 \div 10$	4.3
$34 \div 100$	3.4
$43 \div 10$	0.85
$58 \div 10$	0.34
$85 \div 100$	0.43
$85 \div 10$	5.8
$58 \div 100$	3.8
$38 \div 10$	0.58



Plot It Game

You need:

0 - 9

0 - 1 landmarked number line (at the bottom of the page)

To play:

Take turns to throw the dice twice and make a two-digit number.

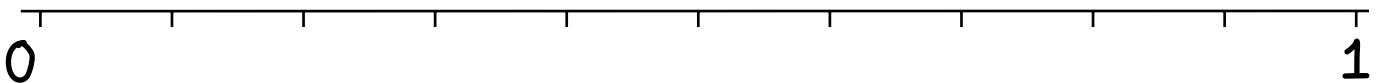
Divide the number by 100.

Convince your opponent where you are going to plot the number on the number line.

Plot and label your point.

To win:

The winner is the first player to plot 4 points without their opponent in between.





Do It 3

Insert < or >

3.5

>

2.5

1.1

<

1.9

4.3

>

4.1

10.1

>

9.9

5.3

<

5.4

0.7

<

0.8

2.9

<

3.1

0.9

<

1.2

0.8

>

0.3

0.6

>

0.5

Challenge It 2

Find the missing digits.
The numbers are in order from smallest to largest.
Solve it in several ways.

0. 0 9, 0. 1 2, 0.1 6, 0. 2 5

0.2 7, 0.2 8, 0. 3 4, 0.35

Possible solution

Solve it using the digits 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9 once each.



Compare Decimals Game

You need:

0 - 9 dice

Game Board template (at the bottom of the page)

To play:

Players take it in turns to throw the dice to get one digit and put the digit into their number.

Once it has been placed it cannot be moved.

Players then throw again to get a second digit.

The player with the highest number scores a point.

To win:

The winner is the first player to score 10 points.

Player 1

0.

--	--

Player 2

0.

--	--



Round each number to the nearest whole number.

3.9

4

4.9

5

6.1

6

7.4

7

69.9

70

19.8

20

3.2

3

42.7

43

0.5

1

3.5

4

62.5

63

9.5

10

Challenge It 4

Write the solutions just as pence, then as pounds and pence using decimal notation.

Coco buys some sweets and pays with a £5 note.

Her change is 3 silver coins.

Investigate how much she could have spent.

Possible solution

Change: 3 x 5p coins = 15p

Spent 485p or £4.85

Colin buys some sweets and pays with a £10 note.

His change is 5 silver coins and one bronze coin.

Investigate how much he could have spent.

Possible solution

Change: 5 x 50p coins

plus 1 x 2p coin = 252p

Spent 248p or £2.48



Money Game

You need:

0 - 9 dice

Game template for each player

To play:

Players take it in turns to throw the dice three times and put the digits into their template to make two amounts of money.

Find the total of the two amounts and convert your answer to pence.

The player with the higher total scores a point.

To win:

The winner is the player with the most points after 5 goes each.

Player 1

£0.

£1.0

Player 2

£0.

£1.0