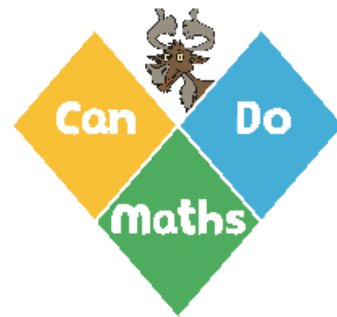


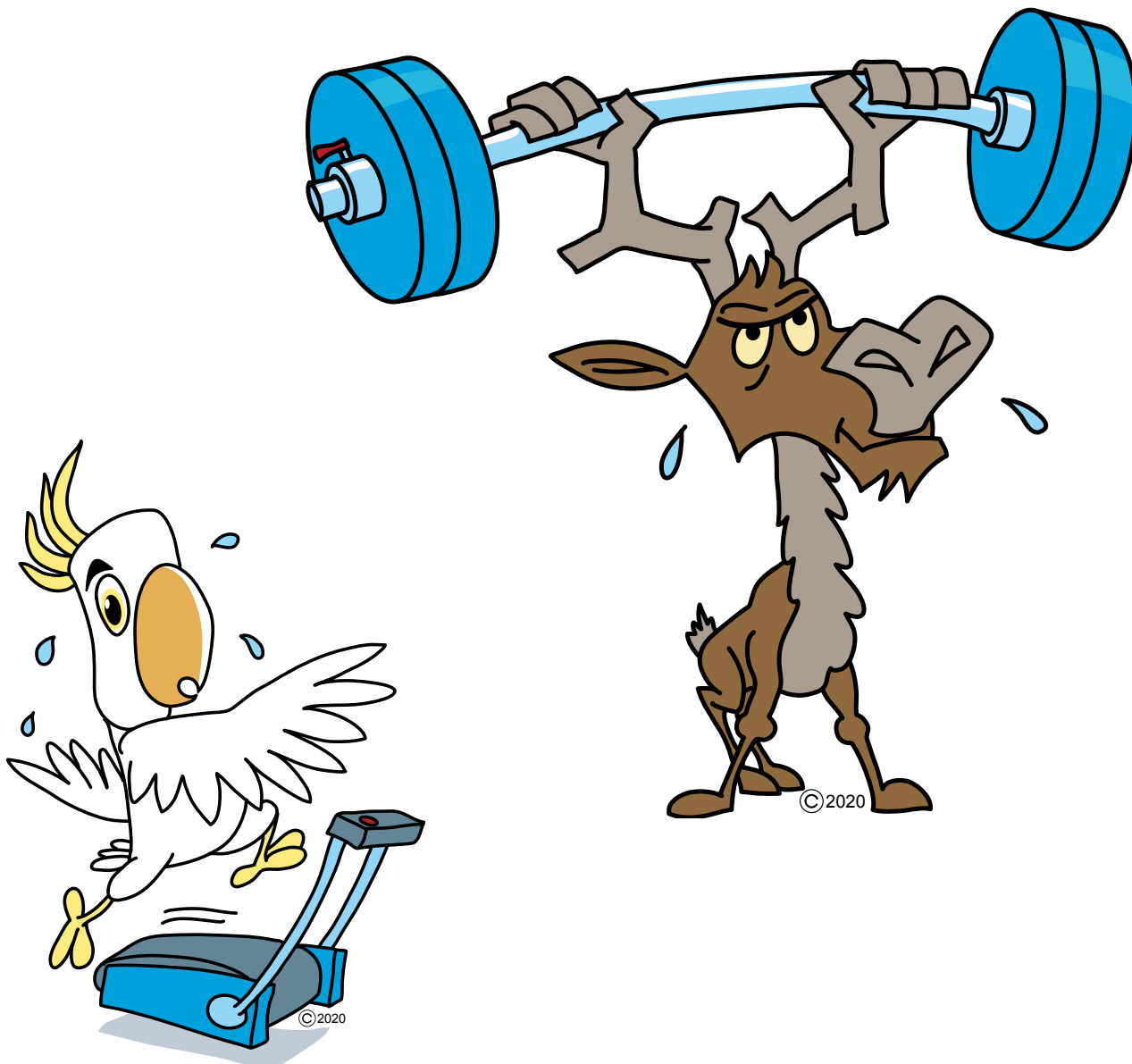


Colin and Coco's Deliberate Practice

Year 6 Unit 2

Decimals

Answers





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 the value of digits in decimal numbers	1		
Multiply decimals by 10		1	
Multiply decimals by 100		1	1
Multiply decimals by 1000		2	
Divide decimals by 10	2	3	
Divide decimals by 100	2	3	2
Divide decimals by 1000		3	
Multiply O.t by Ones			3
Multiply O.th by Ones	3		



Do It 1

What is the value of the 3 in each number?

1.739

3 hundredths

2.453

3 thousandths

9.308

3 tenths

1.003

3 thousandths

0.131

3 hundredths

What is the value of the 7 in each number?

6.759

7 tenths

3.078

7 hundredths

1.007

7 thousandths

2.706

7 tenths

0.117

7 thousandths

Challenge It 1

Match the calculation to the correct answer.
Fill in the missing buddies.

3.02×10		2.3
3.2×100		3.2
0.32×10		30.2
0.023×100		320
0.07×100		7
0.007×10		70
0.7×100		0.07
0.07×10		0.7



Decimals $\times$ 100 Game

Play It 1

You need:

0 - 9 dice

0 - 10 blank number line

To play:

Take it in turns to roll the dice twice and choose which digit represents hundredths and which represents thousandths. Say your number aloud.

Multiply your number by 100 and plot it on the number line.

For example:

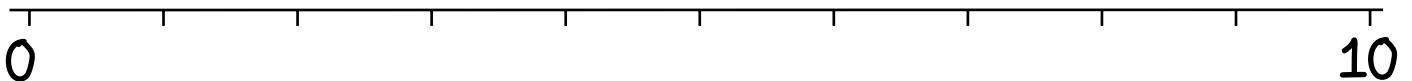
Player 1: I have thrown 4 and 5.

I choose for the 5 to represent hundredths and the 4 to represent thousandths so my number is 0.054

$0.054 \times 100 = 5.4$ which I will plot between 4 and 5 on the number line.

To win:

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





Do It 2

Calculate:

$1.1 \div 10 =$

0.11

$0.12 \div 10 =$

0.012

$0.32 \div 10 =$

0.032

$4.21 \div 10 =$

0.421

$0.08 \div 10 =$

0.008

$1.02 \div 10 =$

0.102

$1.1 \div 100 =$

0.011

$0.2 \div 100 =$

0.002

$51.8 \div 100 =$

0.518

$4.2 \div 100 =$

0.042

$0.12 \div 10 =$

0.012

$32.5 \div 100 =$

0.325

Challenge It 2

Use the digits 1, 6 and 8 and zeros to make a decimal number with two decimal places.

Multiply it by 1000.

For example: 61.08×1000
 800.16×1000

Investigate calculations.

How many calculations can you find with an answer between 10,000 and 20,000?



Decimals $\div$ 100 Game

Play It 2

You need:

0 - 9 dice

0 - 1 blank number line

To play:

Take it it turns to roll the dice twice and choose which digit represents tens and which represents ones.

Divide your number by 100 and plot it on the number line.

For example:

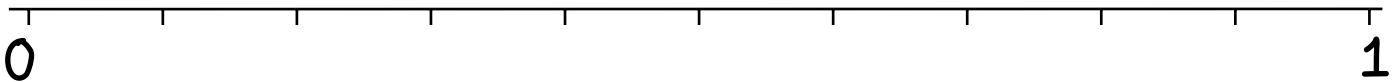
Player 1: I have thrown 3 and 8.

I choose for the 3 to represent tens and the 8 to represent ones so my number is 38

$38 \div 100 = 0.38$ which I plot between 0.3 and 0.4 on the number line.

To win:

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





Do It 3

Calculate mentally using jottings, or a formal written method :

$3.21 \times 3 = 9.63$

$4.12 \times 4 = 16.48$

$2.42 \times 5 = 12.1$

$4.11 \times 5 = 20.55$

$3.52 \times 4 = 14.08$

$6.48 \times 5 = 32.4$

$5.12 \times 4 = 20.48$

$6.01 \times 4 = 24.04$

$5.21 \times 6 = 31.26$

$324 \times 6 = 1,944$

Use this fact to find:

$$\begin{array}{l} 32.4 \times 6 \\ 6 \times 3.24 \\ 324 \times 0.6 \end{array}$$

$$\begin{array}{l} 1944 \div 60 \\ 194.4 \div 6 \\ 32.4 \times 3 \end{array}$$

Challenge It 3

Match the calculation to the correct answer.
Fill in the missing buddies.

$3.02 \div 100$	0.232
$3.2 \div 100$	0.0322
$32.2 \div 1000$	0.0302
$23.2 \div 100$	0.032
$0.7 \div 1000$	0.017
$1.7 \div 1000$	0.0007
$0.7 \div 100$	0.0017
$1.7 \div 100$	0.007



Multiplying Decimals Game

Play It 3

You need:

A baseboard (as shown at the bottom of this page)

Set of cards (as shown at the bottom of this page)

To play:

Shuffle the cards and deal three to each player. Each player creates a multiplication calculation on the template.

Both players now find the answer to their own calculation using a mental strategy if possible.

The player who calculates the highest total wins a point.

The players then rearrange their cards to try and win a second point by calculating the lowest total.

To win:

The first player to get 10 points wins the game.

$$\boxed{}.\boxed{} \times \boxed{}$$

2	2	3	3	4	4
5	5	6	7	8	9