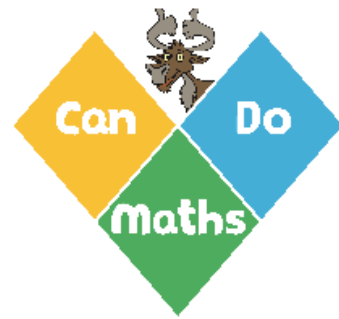
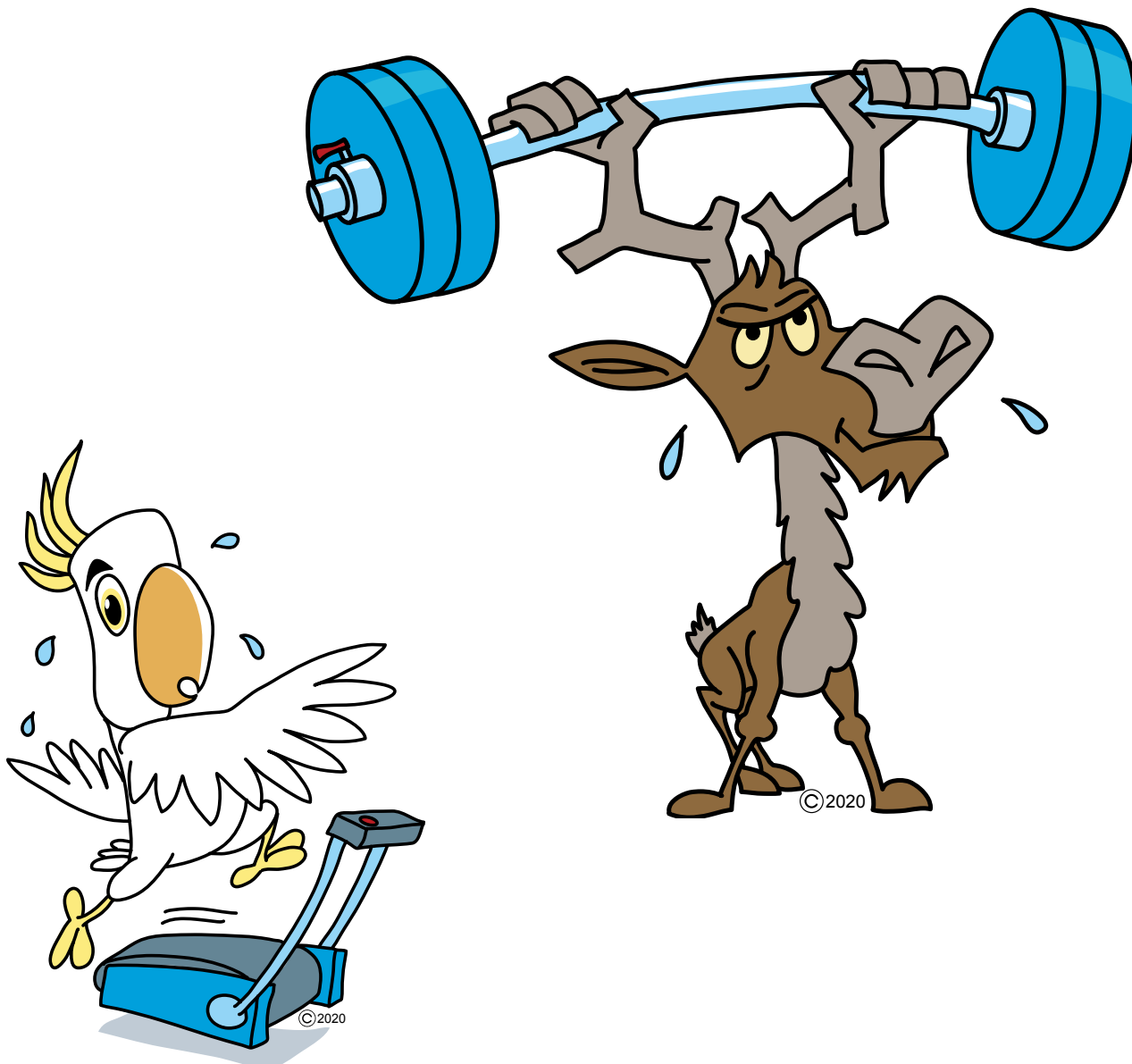




Colin and Coco's Deliberate Practice

Year 5 Unit 1

Number and Place Value





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.

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Do It 1

Represent the numbers.

10,000s	1000s	100s	10s	1s

What is the value of the 3 in each number?

12,413

24,301

15,432

23,010

32,004

31,040

Challenge It 1

Match the description of the digit to a correct number.
Fill in the missing buddies.

3 tens of thousands	14,306
3 thousands	54,063
3 ones	31,605
	43,046
7 tens	98,079
7 thousands	79,008
7 tens of thousands	
7 hundreds	98,790



Digits Game

Play It 1

You need:

Pencil and paper each

To play:

Each player writes two 5-digit numbers using the digits 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9 once each, without showing their opponent.

Take it in turns to choose a column and number to request from your opponent's numbers.

Player 1: "Can I have the hundreds digit from your second number please?"

Player 2: "My second number has three hundreds so you score 3"

Player 2: "Can I have the tens of thousands digit from your first number please?"

Player 1: "My first number has five tens of thousands, so you score 5"

Have three goes each, then add your three digits together. The player with the largest total scores a point.

Write two new numbers and play again.

To win:

The winner is the first player to score 5 points.



Do It 2

Write these using numerals.

Write these numbers in words.

eighty-two thousand, six hundred and two

10,342

forty-two thousand, one hundred and fifty

32,507

thirty thousand, nine hundred and thirty-one

43,900

twenty-four thousand and one

40,801

sixty-one thousand, three hundred

90,054

fifty thousand and eleven

18,010

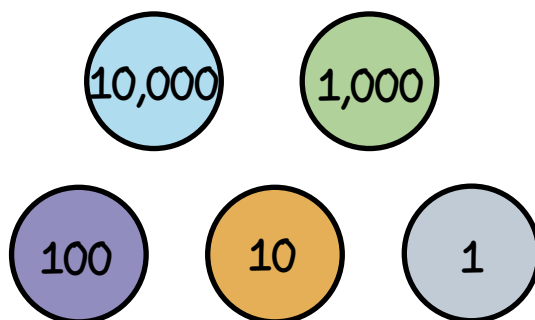
ninety thousand and seven

70,012

Challenge It 2

Use 6 Place Value Counters to create different 5-digit numbers.

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.

Investigate possible numbers you can make.



Find my Number game

Play It 2

You need:
Pencil and paper

To play:
Player 1 creates a 5 digit number using the digits 0, 1, 2, 3, and 4 once each without showing their opponent.

Player 2 asks up to ten questions to try to establish player 1's number. Player 1 only answers 'yes' or 'no'

Questions such as:

Is the tens digit greater than the ones digit?

Is the hundreds digit odd?

Are any of the digits next to each other consecutive?

You cannot ask particular digit / column questions such as, 'Is the tens digit a 4?'

Keep count of the questions asked.

Player 2 may want to jot some column headings and make notes to keep track of what you have found out!

If player 2 works out the number in fewer than ten questions they score 2 points.

If they get it right after ten questions they score 1 point.

An incorrect guess gives player 1 1 point.

Swap roles and play again.

To win:

The winner is the first player to score 5 points.



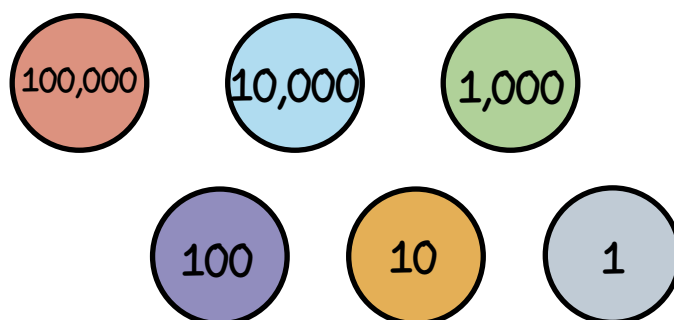
Do It 3

Insert < or >

23,000		22,000	62,013		62,301
40,000		60,000	40,670		40,067
34,000		37,000	34,377		34,773
75,000		85,000	9,999		10,000
20,000		2,000	11,000		10,999

Challenge It 3

Use 6 Place Value Counters to create different 6-digit numbers.
The thousands digit must be greater than the hundreds digit. 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.

Investigate possible numbers you can make.



Same Ten Thousands Game

Play It 3

You need:

0 - 9 dice

0 - 100,000 Landmarked number line

To play:

Take it in turns to throw the dice to get 3 digits and complete a 5-digit number.

, 0 0

Plot your number on the number line convincing your opponent you are plotting it in the correct place.

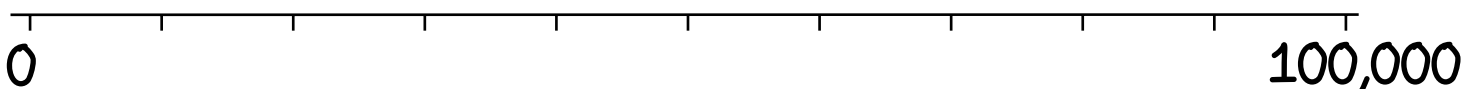
Player 1: Digits thrown 2, 3 and 7

Number created 27,300

Plot 27,300 on the number line. It goes between 20,000 and 30,000, after the centre, because it is more than 25,000

To win:

The winner is the first player to get 4 of their points plotted within the same tens of thousands.





Do It 4

What is the value of the 3 in each number?

530,750

183,045

660,321

309,461

What is the value of the 7 in each number?

790,609

203,705

107,021

472,039

Write these using numerals.

two hundred and eighty-two thousand, four hundred and two

six hundred and forty thousand, one hundred and fifty

three hundred thousand, and thirty

Challenge It 4

Match the description of the digit to a correct number.
Fill in the missing buddies.

forty thousand and twenty
forty-two thousand and four
forty thousand two hundred
sixty-one thousand one hundred
sixteen thousand and ten
sixty thousand and one
sixteen thousand one hundred

42,040
40,200
40,020
42,004
61,100
60,001
16,100



Digits Game

Play It 4

You need:

Pencil and paper each

To play:

Each player writes two 6-digit numbers using the digits 1, 2, 3, 4, 5 and 6 twice each, without showing their opponent.

Take it in turns to choose a column and number to request from your opponent's numbers.

Player 1: "Can I have the hundreds of thousands digit from your second number please?"

Player 2: "My second number has three hundreds of thousands so you score 3"

Player 2: "Can I have the tens of thousands digit from your first number please?"

Player 1: "My first number has five tens of thousands, so you score 5"

Have three goes each, then add your three digits together. The player with the largest total scores a point.

Write two new numbers and play again.

To win:

The winner is the first player to score 5 points.



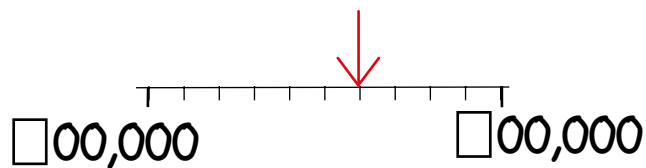
Do It 5

Insert < or >

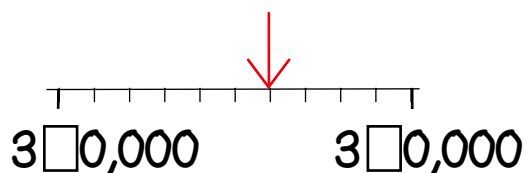
63,000		62,000	62,013		62,301
240,000		260,000	140,670		140,067
934,000		937,000	634,377		634,773
475,000		485,000	99,999		100,000
820,000		802,000	111,000		110,999

Challenge It 5

Put consecutive digits in the empty boxes.
What is the arrow pointing to?
Investigate possible numbers.



Put consecutive digits in the empty boxes.
What is the arrow pointing to?
Investigate possible numbers.





Largest Wins Game

Play It 5

You need:

A baseboard as shown at the bottom of this page)

0 - 9 dice (or cards)

To play:

Take it in turns to roll the dice to get a digit and place it into your number template choosing which column to put it in. Once it is placed it cannot be moved.

Then it is the next player's turn.

Play continues until you have both made a six digit number. (Or until it is impossible for one of the players to win, due to where they have placed digits.)

The player who has made the larger number scores a point.

For example:

Player 1: I have rolled a 3, I am going to place it in the ones column, because it is not very large.

Player 2: I have rolled a 7, I am going to place it in the tens of thousands column, because it is quite large.

To win:

The winner is the first player to score five points.

100,000s	10,000s	1000s	100s	10s	1s	



Do It 6

Round each number to the nearest ten thousand.

32,456

22,222

55,555

60,456

162,000

487,000

Round each number to the nearest hundred thousand.

132,456

222,222

555,555

549,456

150,000

487,000

Challenge It 6

Put a number in the box so the numbers are in order from smallest to largest.

175,000

185,000

350,000

359,000

516,400

516,500

430,100

430,200

If possible, solve each one using:

1. six odd digits
2. only 2 different digits
3. six consecutive digits (not necessarily in order)



Rounding to the Nearest 10,000 Game

Play It 6

You need:

0 - 9 dice (or cards)

To play:

Throw the dice to get 5 digits and make a 5-digit number.

Round your number to the nearest ten thousand.

Score the tens of thousands digit.

For example:

Player 1: Digits thrown 4, 2, 7, 7, 3

Number created 77,423

Rounded to the nearest ten thousand: 80,000

Score 8

Now it is player 2's turn.

To win:

The winner is the first player to score a total of 30 or more.



Do It 7

Start at 4 and count

Start at -4 and count

Start at -2 and count

5 steps backwards

5 steps forwards

8 steps backwards

7 steps backwards

1 step backwards

10 steps forwards

4 steps backwards

4 steps forwards

12 steps forwards

3 steps forwards

7 steps forwards

10 steps backwards

Challenge It 7

Write a simple addition calculation to generate three numbers.

Now use those numbers, as negatives and positives in as many ways as you can to complete the statements:

Start on °C

Get °C warmer.

Result is °C

Start on °C

Get °C colder.

Result is °C

Start with three new numbers.



Back and Fore Through Zero Game

Play It 7

You need:

- 0 - 9 dice (or cards)
- 10 to 10 number line

To play:

Start with a counter on zero.

Player 1 wants to reach 10

Player 2 wants to reach -10

Take it in turns to throw the dice and state the counting you are going to do, then do it!

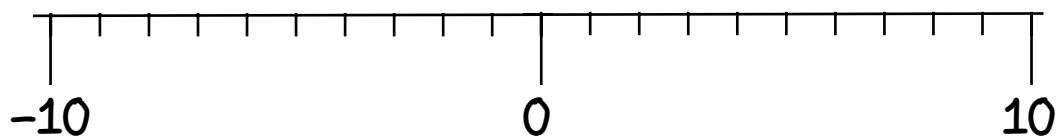
For example:

Player 1: The counter is on -3. I have thrown 5 so will count forwards 5 steps. I end on 2

Player 2: The counter is on 2. I have thrown 7 so will count backwards 7 steps. I end on -5

To win:

The winner is the first player to move the counter to their end of the line.





What numbers do these Roman Numerals represent?

CLX

CCXXX

CXX

M

CCC

D

CXC

MM

What years do these Roman Numerals represent?

MMXIV

MMXX

MCMXC

MDCCC

Challenge It 8

C C M M X X

Choose any three letters from the list to make a Roman Numeral.

What number does it represent?

Using the same three letters can you make other numbers?

Investigate the numbers you can make.



Roman Numerals Game

Play It 8

You need:

Roman Numeral Cards (at the bottom of the page)

To play:

Shuffle the cards and deal three to each player.

Player 1 chooses from their cards to make a Roman Numeral and states what the number represents. They may use 1, 2 or 3 of their cards.

Player 2 tries to make a larger number with their Roman Numerals.

For example:

Player 1: Has cards C, X and V.

Makes CXV and states one hundred and fifteen.

Player 2: Has cards C, I and V.

Cannot make a larger number.

Player 1 scores a point.

If player 2 makes a larger number then they score the point.

To win:

The winner is the first player to score 5 points.

