

Multi Digit

Overview

This activity is a game which students at all numeracy levels enjoy.

It highlights the significance of place value in determining the size of whole numbers.

It encourages students to speak, listen to and write whole numbers in English.

It also provides opportunity for practising addition.

The activity can be used for a range of large numbers from thousands to millions, depending on the size of the grid, see Activity Sheets 1 & 2.

Skills and Knowledge

- Place value in whole numbers
- Addition
- Verbalisation of large numbers
- Writing large numbers
- Ordering large numbers

Preparation and Materials

- 1 10 sided dice
- At least one calculator
- Activity Sheet 1 (at least 1 per student)
- Activity Sheet 2 (several per student)

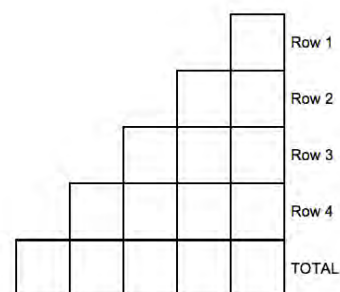


Suggested Procedure

Distribute copies of the smaller grid from Activity Sheet 1.

Explain:

- *You will play individually.*
- *The aim of the game is to obtain the highest possible total at the end of each round.*
- *The numbers you use will depend upon the roll of the dice.*
- *Each time the dice is rolled you put the number into one square of the grid.*
- *We will do one together as an example:*



Example Game:

Roll the dice, e.g. 8 shows.

- *You must write 8 in the only box in row 1 of the grid.*

Roll the dice again (e.g. 6).

- *This time you choose which of the boxes in row 2 you put the number in*
- *In the first box it will be worth 60, in the second it will be worth 6.*
- *Remember you are looking for the highest number.*



Roll the dice the second time for row 2 (e.g. 4).

- We have to put this number in the remaining box of row 2.
- We keep going like this until all boxes in the grid (except for the last line) are filled.
- You have to finish each row before moving down to the next.

You now add together all the numbers as in normal addition of numbers:

				8	Row 1
			6	4	Row 2
		7	5	9	Row 3
	8	1	3	4	Row 4
	8	9	6	5	TOTAL

Calculators should be on hand for students to whom this addition will be a problem (addition is not the main aim of the exercise). Alternatively, students can help each other with the additions.

The next step is to encourage the students to read their numbers out loud. They should read the numbers in such a way that 6,578 would be 'six thousand, five hundred and seventy-eight'. This is best done by a series of question such as:

- Who thinks they might have the biggest number? What is it?
- Does anyone have a higher number?
- Does anyone have a number between these?
- Who thinks they have the lowest?

By listening to others reading their numbers, students should decide whether their own is bigger or smaller. However, if this seems too difficult you may wish to record the numbers on the board as they are read out.

Once you have practised with the small grid, move on and repeat the game on the bigger grid. Larger numbers in the millions will be encountered on Activity Sheet 2.

Note: for some students a gradual increase in grid sizes might be more appropriate than jumping immediately to the larger grid. In this way you can assist them to develop the language of large numbers over a period of time by making the game a regular activity.

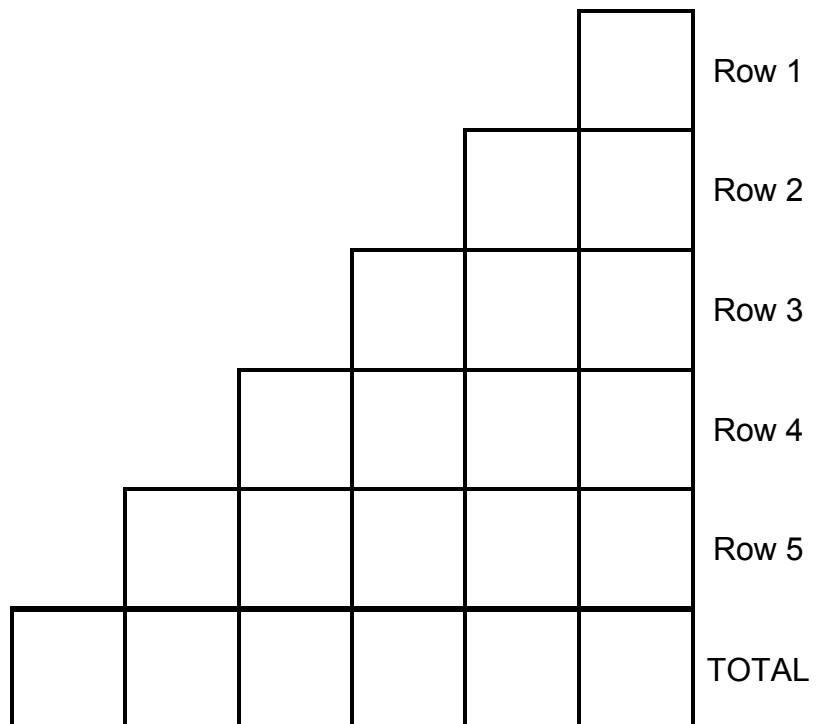
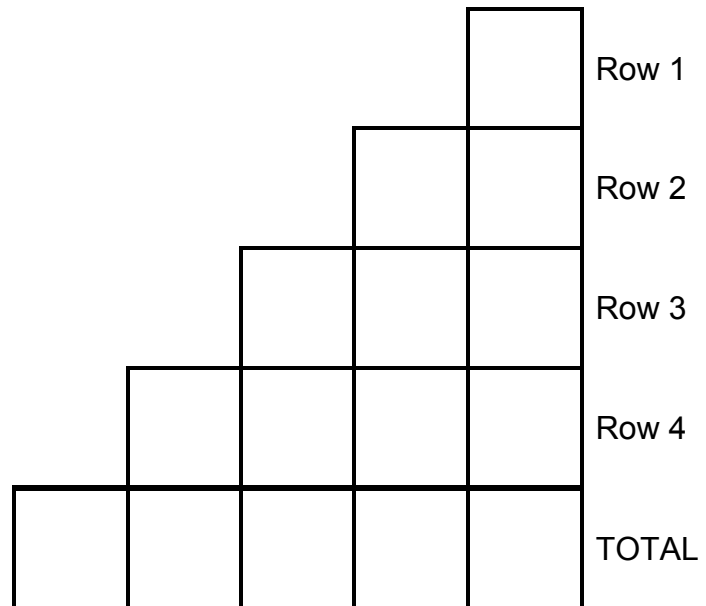
Extensions

- Ask students to arrange themselves in a line, according to their number, from the smallest to the largest. They should not look at other students' numbers but listen to each other read them aloud.
- Allow students to practice writing their numbers in words by asking them to write out a cheque for that amount of dollars.

Further practice at reading large numbers aloud can be gained by looking at numbers in newspapers, and for very large numbers, at *Tattslotto* or other lottery prizes in the paper.

Another activity that encourages this skill is *Capital Cities of Australia*.







								Row 1
								Row 2
								Row 3
								Row 4
								Row 5
								Row 6
								Row 7
								TOTAL

								Row 1
								Row 2
								Row 3
								Row 4
								Row 5
								Row 6
								Row 7
								TOTAL

