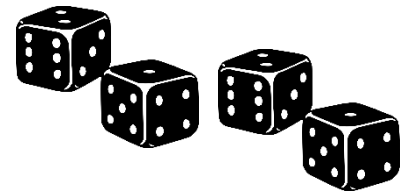


## ONE NUMBER FOUR DICE

### Background:

This game is a variation of the numbers game played on the popular television program, Countdown (called Letters & Numbers in Australia).



**Materials:** Four dice

**WALT:** Use our knowledge of numbers and the four operations to create the target number

**WILF:** Understanding of how numbers can be made using different operations

**Game Objective:** To make the target using the numbers on the four dice

### Summary:

- Teacher selects a target number
- Four dice are rolled
- Students need to try and make the target number using the numbers on the four dice and any operation
- For example, if the dice numbers were, 6, 2, 3 and 4, and the target was 24, a solution could be,  $6 \times 2 + 3 \times 4 = 24$
- If the target number cannot be made, the students need to aim to be as close as possible
- Students do not need to use all four numbers to reach the target but can only use each number once

### Variation:

The target number, number of dice and type of dice (6-sided, 9-sided, etc.) can be varied to modify the difficulty of this game. A point or tallying system could also be developed where solutions could be sorted by the number of dice used. A random number generator or spreadsheet could be used to generate the target number and the dice rolls.

### General Advice:

It is important to encourage students to record equations using correct mathematical notation. This process may need to be modelled as the student explains their method to the class. Often students will write equations as they perform each step. This can result in an equation that mathematically is incorrect.

For example, imagine that the target number is 12 and the dice show 1, 1, 6 and 5.

A student might record  $5 + 1 = 6 + 6 \times 1 = 12$ . Although the solution is correct the 'grammar' of the equation is incorrect as  $5 + 1 \neq 12$ .

Instead this equation could be correctly recorded as:  $5 + 1 + 6 \times 1 = 12$ .