Countdown


African Maths Initiative

**\*\* – Facilitator**

**Introduction**

This type of puzzle comes from a TV show called Countdown. The first task should help students practice techniques to use in Task 2. Students might be surprised at how many numbers you can make using only 100, 2 and 3.

Students could start on their own and then share their answers to see if as I group they can find them all. Don’t tell them there are 19 until they get there!

**Solution**

**Task 1**

100, 101, 102, 103, 105, 106, 150, 194, 197, 200, 203, 206, 294, 298, 300, 302, 306, 500, 600Some of the tricky ones are, e.g. 194 = $(100-3)×2$

It shows how useful brackets are!

**Task 2**

Here is one way to solve each problem. Students may come up with other correct solutions – just check they have only used each number once!

635 $=6 ×100+7×5$

667 $=6×100+50+5+5+7$

665 $=7×(100-5)$

564 =$6×(100-7+\frac{5}{5})$

785 = $7×100+50+5×6+5$

202 = $=(7-5)×(100+\frac{5}{5})$

420$=6×7×100÷(5+5)$

419 $=(7×6×50-5)÷5$

**Extension**

You can play this game yourself by picking random numbers. There is *usually* a solution!!