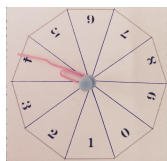


TARGET 10 THOUSAND

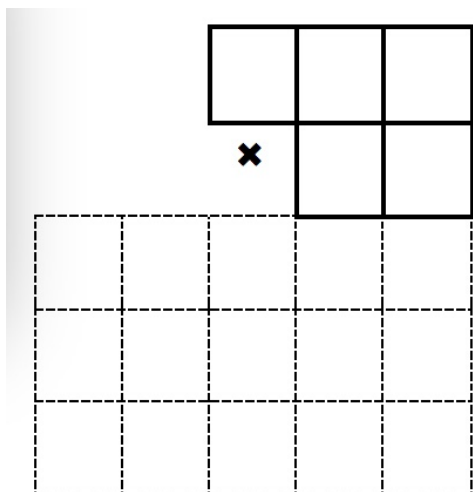


LESSON STARTER GAME FOR THE WHOLE CLASS

You will need a 0 to 9 spinner or special die.

See instructions for making spinners below.

Each player draws a grid like the one shown.



Spin the spinner and all the players must write the digit in one of the top five boxes.

Once a number is written it cannot be changed.

Repeat four more times.

Then the learners multiply the 3-digit number by the 2-digit number and write the answer on the bottom line.

The player (or players) with the answer closest to 10,000 wins.

Score 1 point for a win.

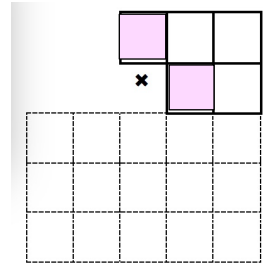
ALTERNATIVE VERSION OF THE TARGET 10 THOUSAND GAME.

The players write down all 5 numbers and then at the end decide where to place them. This is a game of skill that involves mathematical thinking and not luck.

GAME FOR 2 PLAYERS Each player draws a grid like the one shown. They take turns to spin the spinner and each player decides which of their 5 cells to fill in. You can't change the position of the number once it is written in. After 5 spins each player multiplies their 3-digit number by their 2-digit number and writes the answer on the bottom line. The players check each other's answers and agree on who has won that round. They need to understand that they must each find the difference (positive or negative) between their answer and 10,000 and compare their difference with the other player's difference.

HELP

To get near the target of 10 thousand, if you round the top number to the nearest hundred and the bottom number to the nearest 10 then you can estimate the product. Another method is to think about the numbers in the two shaded boxes and put numbers in the shaded boxes that have a product of 8 or 9.



For example: $1 \times 8 = 8$ or $2 \times 4 = 8$ or $3 \times 3 = 9$ and then you will get calculations like

$$127 \times 83 = 10541$$

$$256 \times 43 = 10922$$

$$314 \times 35 = 10990$$

NEXT

Start with any 5 numbers and decide where to place them in the grid to get the answer as close as possible to the target.

For example for 2, 3, 4, 5 and 6 the best answer is

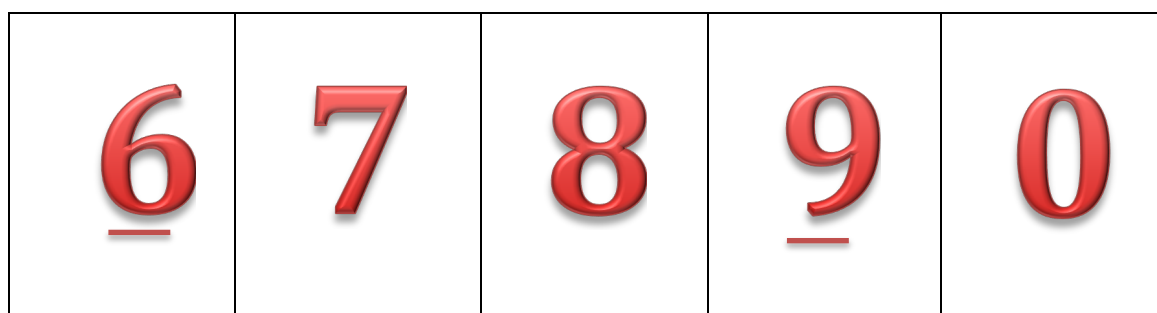
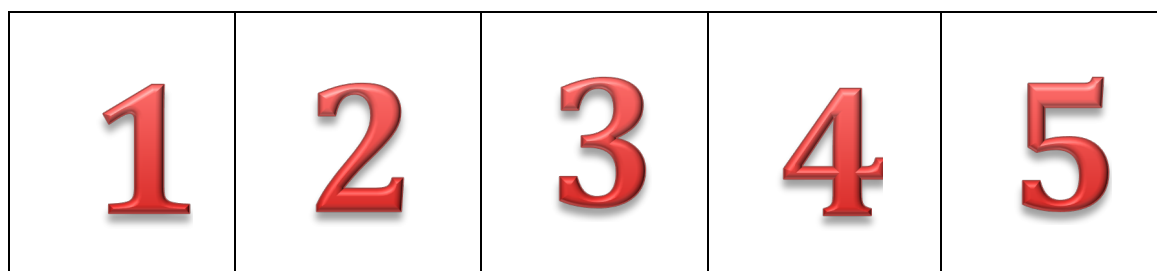
$$456 \times 23 = 10488 \text{ (approximately } 500 \times 20 \text{)}$$

and for 1, 2, 5, 7 and 9 the best answer is

$$527 \times 19 = 10013 \text{ (also approximately } 500 \times 20 \text{)}.$$

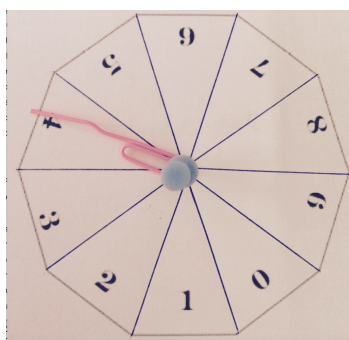
Change the target or change the grid to make it suitable for a different calculation and play the game for your chosen new target or calculation.

Alternatively make 10 cards that can be shuffled so the you can draw one digit randomly from the pack of ten. **In the Target 10 Thousand game the zero is not used.**

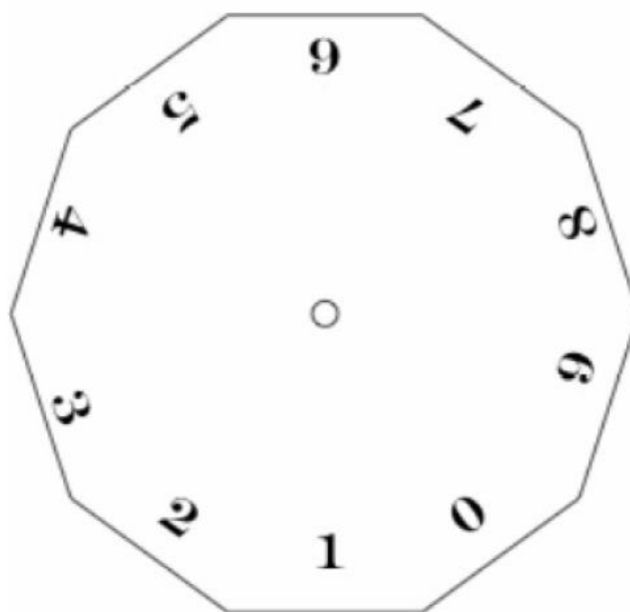


Choose the game that best suits the ages of the players. All the games are played in the same way but there are variations of scoring systems.

MAKE A 0 – 9 SPINNER



To make your own spinner you will need a paper clip and a pin.














Mark in the lines in the template on the right as in the diagram and cut it out.

Open up the paper clip and pin the paper clip and the template down on a flat surface so that the paper clip spins easily.

If you want to make a spinner without using a pin you can hold down the template and the paper clip with the point of a pencil

See below for the cards for playing the Target Game – see page 8.

0	+1	+2	+3	+4
+5	+6	+7	+8	+9
-1	-2	-3	-4	-5
-6	-7	-8	-9	 MINIMUM
 NEAREST TO -10	 NEAREST TO +75	 NEAREST TO 0	 NEAREST TO -7	 MAXIMUM
 NEAREST TO -35	 NEAREST TO -60	 NEAREST TO +15	 NEAREST TO +45	 NEAREST TO +8