

Mental Math: Squaring 2-digit numbers

This one may take a little practice because there are a few steps...

Step	Example
	$\begin{array}{r} 77 \\ \times 77 \\ \hline \end{array}$
Add or subtract to get to the nearest multiple of 10.	$77 + 3 = 80$
Add or subtract that same amount to find the number the same distance "on the other side" of the number to be squared.	$77 - 3 = 74$
Multiply those two results.	$74 \times 80 = 5920$
Square the number you added/subtracted and add it to the product above.	$3 \times 3 = 9$ $5920 + 9 = 5929$

Practice

14^2	27^2	65^2	89^2	98^2
31^2	41^2	59^2	26^2	53^2
21^2	64^2	42^2	55^2	75^2

Answers to practice:

$14^2 = 196$	$27^2 = 729$	$65^2 = 4225$	$89^2 = 7921$	$98^2 = 9604$
$31^2 = 961$	$41^2 = 1641$	$59^2 = 3481$	$26^2 = 676$	$53^2 = 2809$
$21^2 = 441$	$64^2 = 4096$	$42^2 = 1764$	$55^2 = 3025$	$75^2 = 5625$

Race to 1000

Materials needed:

- 2 10-sided dice
- Dry erase markers/erasers

To play:

	Example
Player 1 rolls the 2 dice and uses the result to make a 2-digit number	58
The player squares the number	$58 \times 58 = 3364$
Player 1 chooses a 2-digit number from the square and adds it to his/her running total on the white board. Player 2 adds the other 2-digit number to his/her running total. (If the square only has 3 digits, player 2 would only get a 1-digit number.)	Player 1 – 64 Player 2 – 33
Player 2 takes a turn	
First player to reach 1000 wins	