FACTORS

Organisation

This is a game for 2-4 players with one deck of cards.
Each player will need a recording sheet like the one on the next page.
Remove the K, Q, J, 10 and Jokers. Ace = 1
This game would suit students from Years 4-7.

Rules

1. Divide the deck of cards into two equal piles. Shuffle each pile and place face down. Designate one pile to represent **tens** and the other to represent **ones.**

2. Players take it in turns to turn up the top card of each pile to form their focus number. If a 4 and 2 turn up, then the player's number is 42. The player's task is to think of all the factors of 42. In this case, it would be **1, 2, 3, 6, 7, 14, 21 and 42**. The player's score for that round is formed by adding up these numbers, excluding 42, to get a score of 54, which is recorded on the sheet. If a player turns up a 3 and 7, forming a focus number of 37, then he / she scores **1** for that round because 37, being prime, has only factors of 1 and itself.

Focus Number	Factors	Sum of factors (Excluding the number itself)	Running Total
42	1, 2, 3, 6, 7,14, 21, 42	54	54
37	1, 37	1	55

3. Play continues until a player reaches a set target, eg. 500. Alternatively, the winner is the person with the highest score after 5 or 10 rounds.

4. This game can be simplified by removing the 6, 7, 8, and 9 cards from the tens pile.

5. This game can be made more complex by playing with three piles of cards, representing hundreds, tens and ones. Players turn up the top card in each pile to make a three-digit focus number. Players must use their knowledge of divisibility rules to work out the factors of the numbers.

FACTORS SCORING SHEET

Name _____ Year level _____ Date _____

Focus Number	Factors	Sum of factors excluding the number itself	Running Total

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AVANTI MENTAL MATHS