Tic Tac Maths

The set up:

Playing cards (get rid of Jacks, Queens and Kings. Aces = 1)
Draw a 3 x 3 Tic Tac Toe grid or use the one provided.

To play

- This is a two player game or can be played in teams of two.
- Take turns writing numbers into the empty 3 x 3 grid until all of the boxes have been filled.
- We recommend using 1-digit and 2-digit numbers.
- Deal out 5 cards to each player.
- Players should take turns trying to use their cards and any of the four operations to make one of the numbers on the grid.
- Players must use at least 2 cards every turn.
- They can use up to all 5 cards in one turn.
- A card can only be used once and then it must be discarded.
- If a player can't make any number on the grid, their turn is over.
- Once a number is made, a player can put an 'X' or an 'O' or a counter on their number in order to claim it.
- Replace the cards that were used with new cards, so that you always have 5 cards each turn.
- Now it is the other player's turn.
- The first player to get 3 in a row, column or diagonal is the winner!
- You could play this game several times. The first player to win 3 games in total could be the winner. After each game, write new numbers into the 3 x 3 grid.

To support

- Stick with number amounts that are less than 20.
- Students could play the game using just addition or just addition and subtraction.
- Ask guiding questions, such as, 'What cards could you try first to get close to the amount you are trying to make?'

To challenge

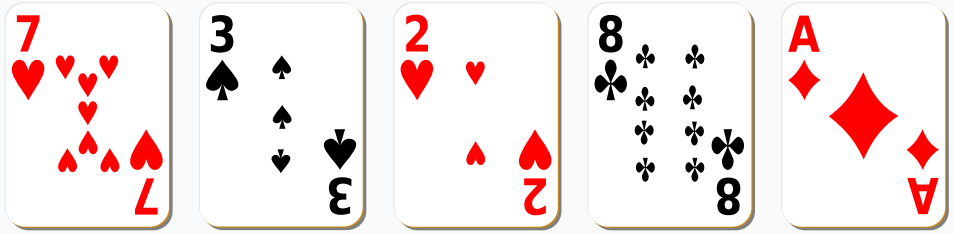
- Encourage students to use all four operations.
- Work with number amounts up to 100 or beyond.
- Encourage students to use the correct order of operations and record their equations.
- Encourage students to think tactically. Which number is their best option each round? Is it possible to make it with the cards they have?

I need to use some of my cards to make one of the numbers on my board. Which numbers could I make? I can add, subtract, multiply or divide!

34	12	11
90	41	26
13	54	19

Here are some of the numbers I could have made. Which one makes the most tactical sense?

34	12	11
90	41	26
13	54	19

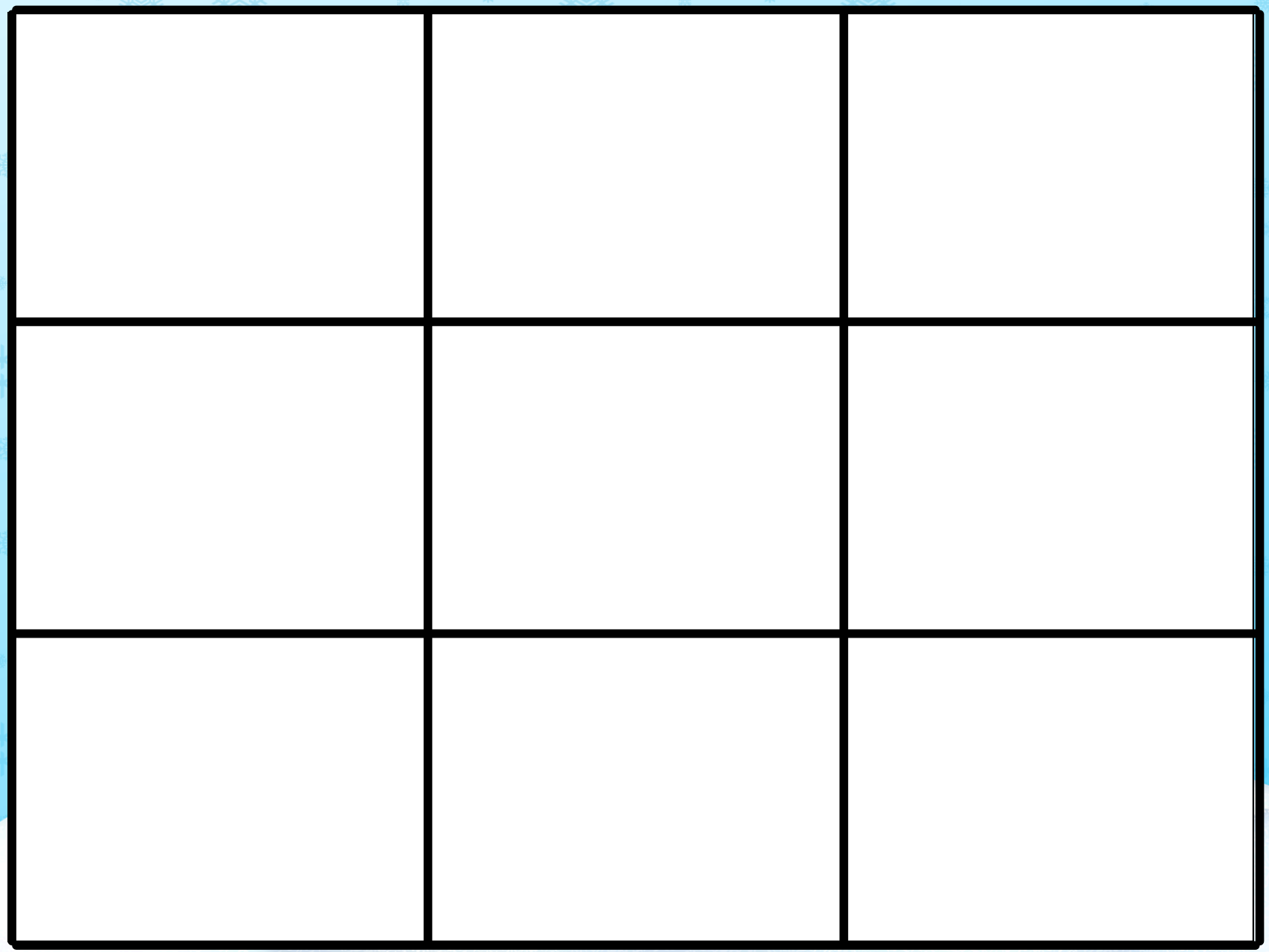


7 + 2 + 3 = 12

8 x 2 + 3 = 19

(3 + 2) x 7 - 1 = 34

Game Board



Printable grids