



## ADDITION AND SUBTRACTION – LEVEL 1: NIM WITH ONE AND TWO

### Materials:

10 tokens or small objects

Pencil and paper

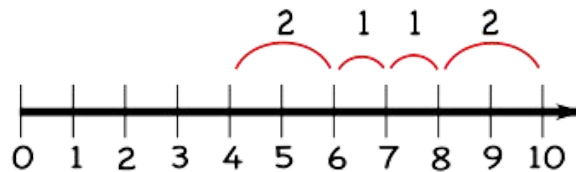
### Instructions:

Choose a target number, say 10. Let your child choose whether to go first or second. The total starts at 0. During a turn, a person chooses to add 1 or 2 tokens to the current total. The first person to reach the target number wins.

### Questions and discussion points:

You can play this at different levels:

For younger children, use tokens or small objects. In this case, a player adds one or two objects to the pile on their turn until the target number is reached. Once this becomes easy, draw a number line from 0 to the target number and move a token one or two spaces along the line during each move to reach the target number. If that becomes easy, you can play the game mentally, without visual help.



### Thoughts to take home:

Once your child can play this game verbally, this is a great game to play on the go. Play it in the car, while waiting in line at the grocery store etc. Change it up and play the game with subtraction, starting at, say, 10, and the person who reaches 0 wins. Or make the target number higher as your child's skills improve. You can also play that the player who is forced to reach the target number loses.

- Do you think there is an advantage to starting first?
- Is there a way you can always win?



## ADDITION AND SUBTRACTION – LEVEL 2: HIT THE TARGET

### Materials:

Deck of playing cards using aces to 10's (aces can serve as 1's)

### Instructions:

Remove the number cards that are larger than your child is comfortable with from the EFM number decks. Shuffle the remaining cards and turn over five cards to use and a sixth card that is the target. Leave the remaining cards as a draw pile.

During a turn, if a player can use the sum or difference of two of the five cards to equal the sixth, the player gets all three cards. They are then replaced with cards from the draw pile. If the player fails, then a new sixth card is turned over and the turn moves to the next player. The player with the most cards at the end of the game wins.

If the game becomes easy, you can include higher number cards, say up to 10 to 20. You can allow using 3 or more cards to hit the target, and if your child is ready for it you can include multiplication and division.

### Thoughts to take home:

You can play this game at home with a deck of playing cards or print your own number card decks (use our free printables from the EFM web site).

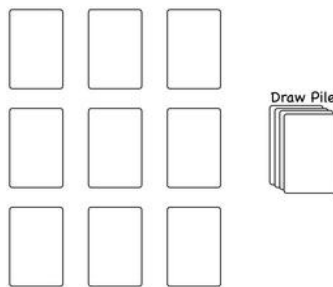
## ADDITION AND SUBTRACTION - LEVEL 3: MEMORY CHALLENGE

### Materials:

Deck of playing cards using aces to 10's (aces can serve as 1's)

### Instructions:

Place nine of the cards face down in a 3 by 3 grid, with the remaining cards put in a draw pile. Take turns flipping two cards face-up. If the cards match, the player gets to keep the cards, replace the two cards with two cards from the draw pile, and continue their turn. If the cards don't match, the player flips the cards back over and ends their turn. The game ends when the last pair of cards is taken. The player with the most cards wins.



If your child is comfortable with the challenge, here are other ideas for how cards can match:

- Use a target sum - two cards match if their sum is the target. Say you pick 7 as the target. A winning match would be 3 and 4.
- Use a target difference - two cards match if their difference is the target. Say you pick 2 as the target. A winning match would be 5 and 7.

### Questions and discussion points:

If you are using the target sum or target difference, decide with your child what a good target number could be. For example, if using cards from 0 to 20, would a target sum of 5 get many matches? Or would a number like 15 be more fun? Go ahead, play and see what happens!

### Thoughts to take home:

An EFM number card deck offers so many math games on the go. They are easily printed out from our web site (and free), and kept in your bag for hours of fun!