SUMthings Right®

by Jim Gomes

Welcome to **SUM**things Right ®**,** the unique math cards that help you do exactly that—SUM things right!

Part II: SUBTRACTION

Please Read: I've created a free two game supplement in case:
- your child is struggling with the first subtraction game in the quick start instructions or
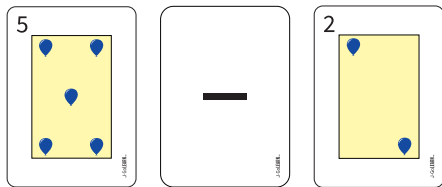- you'd just like to introduce subtraction more slowly for early learners

Please email jim@jgolearn.com and we'll get that to you promptly.

1. Two Card Subtraction (1 - 3 players)

**Purpose:** Learn how to find the difference between two whole numbers (0, 1, 2, 3 ...).
Set Up: Collect the 48 number cards and one of the minus cards. Set aside the rest.
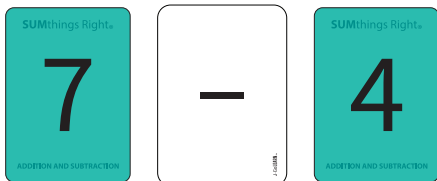**Playing:** Deal three cards face up as shown—bigger number on the left. Player 1 can flip the 2 card and cover 2 balloons on the first card to *reveal* the answer. Player 1 says the difference "three" out loud and returns the flipped card to its original place. Deal a new card face up, on top of one of the original cards for player 2—bigger number on the left. Player 2 answers aloud, and so on (this game has no winner).
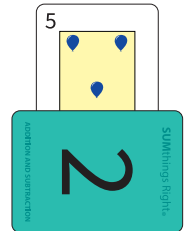
Mastery: *Can you subtract correctly without the symbols on the card faces?*
Deal three cards as shown. The question appears as it would in a textbook or on a worksheet, 7 – 4. Player 1 says the difference "three" out loud, then collects the cards. Repeat, for all players until the cards run out. **TP:** To check answers, turn the first card (7) face up then cover 4 balloons on the 7 card to reveal the answer 3, as shown. **TP:** Try to master each game before playing the next.
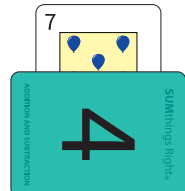
2. Game: Two-Card Subtraction War (1- 3 players)

Purpose: Find the difference between two numbers and identify which player has the largest difference.
Set up: Deal the 48 number cards face down equally among the players. Set a time limit or play until one player wins all the cards.
Playing: Each player turns over two cards from their stack placing the bigger number on the left—player with the largest difference must say their difference correctly to win the cards. If that player, answers incorrectly the player with the second largest difference can win the cards if he/she gives the correct answer to the largest difference, and so on. Only players tied for the win turn over another card until the tie is broken. When players run out of cards, they turn all the cards they've won face down and replenish their stack. Shuffle and continue play. The player with all the cards or the most cards at the time limit wins the game. **TP:** Listen carefully to the other answers. You may get a chance to *steal* the win.

Mastery: *Play the game with the card backs to prove mastery before moving on.*

3. Multiple Subtraction (1-3 players)

Purpose: Learn how to create and solve subtraction problems using as many cards as possible.
Set up: Collect the 48 number cards. Set aside the rest.
Playing: Player 1 reorders the cards with the largest card first to create the subtraction problem (below right). Player 1 then says, "10 minus 1 minus 7 equals 2" and collects all three cards.

Deal three new cards for Player 2 as below. Player 2 selects the 9 and 5 to create a two card difference—below right—as there is no play with all three cards. Player 2 says "9 minus 5 equals 4" and collects the two cards.
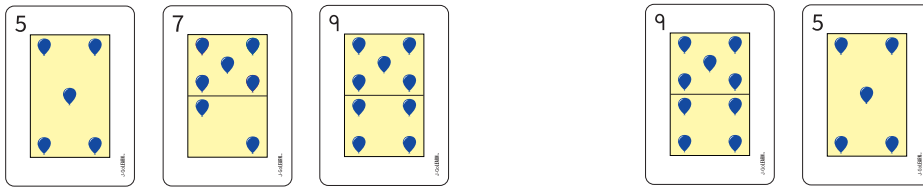
Keep the unused seven card and deal two new cards to replace the 5 and 9. Continue with the next player. When the dealer runs out, the player with the most cards is the winner.
TP: Start with the largest card then select the smallest card(s) to create your question—use as many cards as possible—without going below zero.
**Modifications (Simplify):** 1) Use only cards 0 - 6 to build confidence quickly. 2) Add the cards in pairs (7 - 8, 9 -10, 11- 12) as proficiency increases.
Modification (Challenge): 1) Allow players to create a four or five card subtraction problem if possible e.g., –12 – 7 – 2 –1 will work.

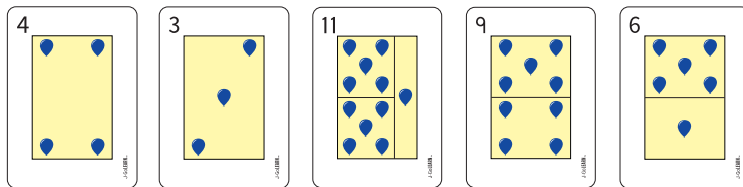**Mastery:** *Play the game with the card backs to prove mastery before moving on.*

4. Subtract to Zero (1-3 players)

Purpose: Learn how create differences that equal zero using as many cards as possible.
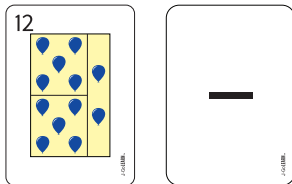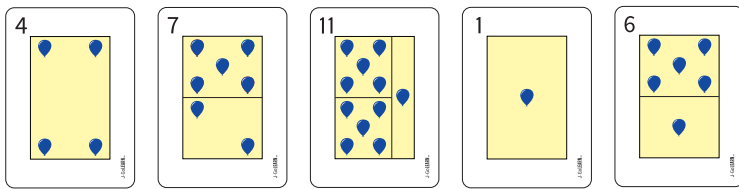
Set up: Place a 12 card face up, followed by a minus card as shown. These two cards remain on the table throughout the game. Then deal five number cards as shown below.

Playing: Player 1 should remove the 3 and 9 cards, while saying "12 minus 3 minus 9 equal 0," as it is the only play. Player 1 keeps those cards, which are replaced by the dealer, as below.

Player 2 could choose 11 and 1, but 4, 7, and 1 is the better choice—use as many cards as possible. Player 2 collects the three cards while saying "12 minus 4 minus 7 minus 1 equal 0." The dealer replaces the missing cards, and play continues. If no play is possible, the player chooses any two cards to be replaced by the dealer, without loss of turn, until a play can be made. When the cards run out, the player with the most cards is the winner.

TP Strategy: Start with the two smallest cards, then add additional cards to see if you can make 12 using more than two cards. This gives the best chance of using more cards.

Modification (Simplify): Start with a smaller card such as 10 instead of 12 to simplify the game. If 10 is selected, the dealer must set aside the 11 and 12 cards.

Modification (Challenge): 1) Start with 15 (use 10 and 5) instead of 12 or start with 20 (use two tens).   2) Increase the number of cards to 6 and start with 25.

Mastery: *Can you subtract to zero without using the symbols on the card faces?*
Start with a 12 card face down followed by a minus sign as before. Deal five cards face down as below. Player 1 should collect the 4 and 8 cards as they are the only play. Continue play following the same rules as in the "**Playing**" section above.

5. Find the Missing Quantity Using Subtraction (1-3 players)

Purpose: Determine the value of the missing number (?) to make the equation true—and to develop problem solving skills.

Set up: Deal five cards as below. Place the larger card before the ? and the smaller one after the = sign. **Note:** the = card is on the back of one of the + cards**.**
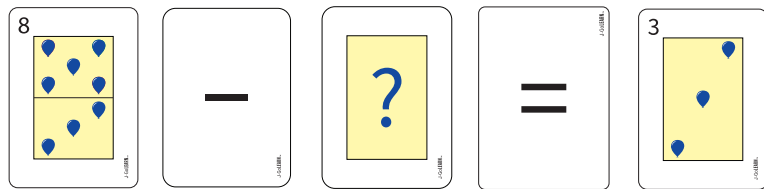
Playing: Player 1 must determine the value of ? to make the equation true, and answer aloud correctly, e.g. "five." **Note**: the answer can be seen by flipping over the last card and covering that many symbols on the first card.
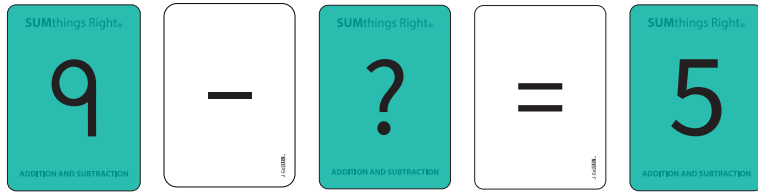
The dealer turns over a new card and must choose which card to cover—the larger of the two face cards must be on the left. If a 12 is turned up, it must cover the 8 as shown below.
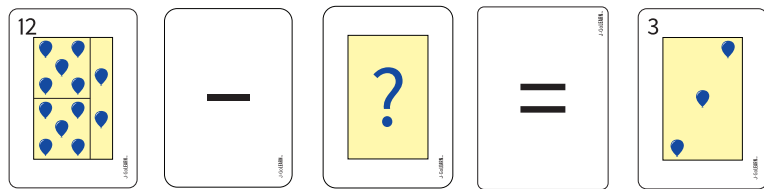
Player 2 answers out loud with "nine," and so on (this game has no winner).

TP: Using the example at left, ask the question; "What do you subtract from 12 to get 3?"

Mastery: *Can you find the missing quantity without the symbols on the card faces?* Play the game using the card backs as illustrated below to prove mastery.

SUMthings Right® **9** ADDITION AND SUBTRACTION	**–**	SUMthings Right® **?** ADDITION AND SUBTRACTION	**=**	SUMthings Right® **5** ADDITION AND SUBTRACTION

$$9 - ? = 5$$

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SUMthings Right®

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