

Nasco's Smooth Operator

By Harry T. Roman

A card game of strategy to improve mathematical skills and also have fun!

About Smooth Operator

In mathematics, an operator is a sign that tells you what to do with two numbers or a group of numbers. For instance:

- A + sign tells you to add two numbers
- A – sign tells you to subtract one number from another
- A \times sign tells you to multiply two numbers
- A \div sign tells you to divide one number by the other

In Smooth Operator, each player has to determine which operator they would like to use on each turn of the game to minimize an opponent's score. As each player tries to minimize the others' scores, eventually one of the players will end up with the highest score and win the game. The score can be set at 500 points, or adjusted to any level the players agree to or which playing time will allow.

Smooth Operator is designed for 2-4 players, age 10 and above. It is designed to improve basic mathematics skills, and also can improve strategic thinking skills by allowing players numerous chances to maximize or minimize scoring opportunities.

Smooth Operator requires three card decks: High Number Deck (50 cards), Low Number Deck (50 cards), and Operator Deck (72 cards). Players provide paper and pencils to keep score.

Directions

Play begins by dealing three operator cards to each player. The order of play is determined by having each player draw a card from the low number deck. The highest card goes first while the lowest card goes last.

Arrange the card decks as shown in Diagram 1. The high number deck is arranged on the left. The operator deck is in the middle. The low number deck is arranged on the right. All three decks are placed face down. The discard piles for the high and low decks are shown in dotted lines on Diagram 1. The operator deck playing area is shown directly below the operator deck pile.

The first player, Player #1, to start the game turns a card over on the high number deck and the low number deck. These are the numbers which will determine what the other players will use for the operator cards in their hands. Now, turn your attention to Diagram 2. Each of the hands for the three players are shown to illustrate the basic

theory of the game. Suppose Player #1 begins and turned over a 12 on the high number deck and 4 on the low number deck. With the operator cards shown in Player #2's hand, they have the following choices to minimize the score for Player #1:

$$12 \times 4 = 48$$

$$12 + 4 = 16$$

$$12 \div 4 = 3$$

The last choice gives the least amount of points to Player #1, so Player #2 puts the divide card into the playing area (face up) for the operator cards, and gives Player #1 three points. Player #2 then draws a new operator card from the operator card deck so as to remain with three cards in their hand. Player #3 now has three choices to make with the operator cards in their hand:

$$12 - 4 = 8$$

$$12 \times 4 = 48$$

$$12 + 4 = 16$$

The first choice is the lowest, so Player #3 puts the subtract card in the playing area (face up) for the operator cards (on top of Player #2's divide card), and gives Player #1 eight points. Player #3 then draws a fresh card from the operator card deck.

Notice that Player #1 did not get a chance to score points on their behalf. Player #1 scored a total of $3 + 8 = 11$ points. All Player #1 was allowed to do was turn over the cards in the high and low number card deck. As play moves to Player #2, then only Player #1 and #3 will use their operator cards. And likewise, as play moves to Player #3, then only Players #1 and #2 will use their operator cards.

During their turn, a player is at the mercy of the other players to acquire points. What operator cards the other players hold in their hands will determine what minimum score that player is likely to receive. Play continues in this fashion until one player reaches the score agreed upon by all the players as the winning score. There are special cards and rules that are discussed in the Special Rules section. These can give the player whose turn it is some interesting options to enliven and equalize the game.

Diagram 1

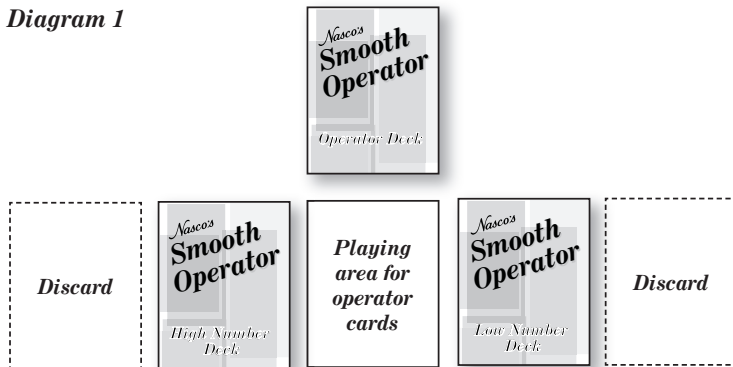
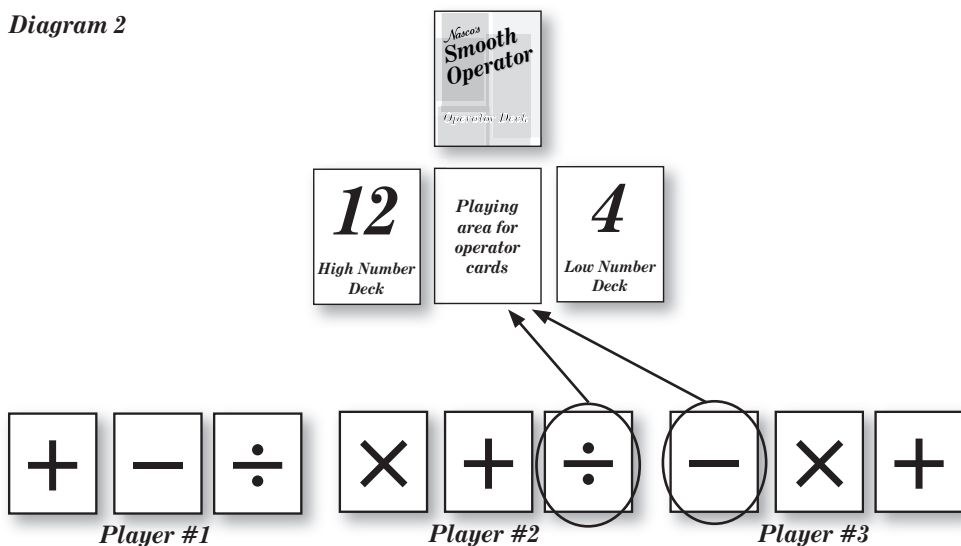


Diagram 2



Special Rules

Some of the operator cards have special instructions and apply only to the player whose turn it is. Normally, as discussed above, that player simply turns over the high and low number cards and waits to find out what points the other players will give them. With special instruction cards in their hands, a player whose turn it is has a special option. They can wait until the other players have awarded a score and then present a special card that entitles them to increase their score beyond what the other players have awarded. These special cards in the operator deck include:

- A free turn card which allows the player whose turn it is to go again and get a second turn at scoring points from the other players.
- A double-play card which allows the player whose turn it is to double the point scores just awarded by the other players.
- A free-choice card which allows the player whose turn it is to, at their discretion, choose an operator sign that maximizes the number of points awarded from each player.

These special cards are treated just like any other operator card and are discarded when used and replaced by a fresh operator card. If a player's hand is occupied with three special cards and they are unable to use an operator card in the usual fashion to award points to another player, then that player holding the cards is penalized. They must give the other player 25 points, discard one of the special cards, and acquire another operator card that will allow play on the next turn.

More Special Rules

Operator cards containing division instructions require special care. All divisions must be done evenly. There can be no remainders. If a player is stuck with three division cards in their hand and cannot make an even division in order to award points to another player, then the stuck player must give the player whose turn it is 25 points. The stuck player, in this case, may not discard one of the division cards in order to get to a more favorable situation, but must continue to play and possibly incur future penalties until the normal play of the game corrects their situation.

During play, if one or more of the decks become exhausted, they may simply be reshuffled and reused until one of the players wins.

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