## Basic Facts Math Games!!!

## Addition to 21

Materials - deck of cards, pencil and paper
Object - be the first to score 21 or more points
Instructions:

1. Sort the deck
2. Split the cards in to two equal groups
3. Player 1 turns over 2 cards from the deck and records the sum. If either of the cards is a face card the sum is zero. Draw a line under your score.
4. Then, player 2 does the same.
5. Keep repeating this process adding your score to your previous total; however, your score automatically becomes zero if 2 face cards are turned over and that player has to start from zero again on their next turn.
Variations: This game can be increased in difficulty by adding cards:

- $6,10, \mathrm{Q}$ and call it 41
- $6,7,10, \mathrm{Q}$ and call it 61
- $6,7,8,10, \mathrm{Q}$ and call it 81
- $6,7,8,9,10$, and all of the face cards and call it 100


## Subtraction 21

Addition 21 can be reversed by starting at 21 and subtracting until you get zero or less. In this game when you get 2 face cards you go back to the beginning score of 21 .

## Subtraction 100

Played in the same way as Addition 100 but start at 100 and subtract with the winner being the first to reach zero or less.

Materials: deck of cards, pencil and paper
Object: To force all other players into a position where they can't play a card. The sum cannot exceed 99. When a player can't play he or she drops out. The last player in wins. Number of players: $2-4$

How to Play:

1. Deal 3 cards face down to each player
2. Each player looks at his/her cards
3. First player on the left of the dealer plays a card and picks one up
4. Second player plays a card and adds its numerical value to the first players card. ( $\mathrm{He} /$ she picks up a card. If you forget to pick up, you lose the opportunity)
5. Third player plays a card and add its value to the previous one
6. And so on, until a player cannot make a sum less than, or equal to 99
(Ex. If player 2 plays a card which makes the sum of 98 and player 3 has a 5, 7 and 8 in her hand, then player 3 is out and the turn goes to player 4 who would have to have an ace, 2,9 , or 10 in order to play (see card values below)
Value of Cards:
Ace $=1$ or 11
Deuce (2) makes the total 99 immediately
$3,4,5,6,7,8$ - face value (count for $3,4,5,6,7$, or 8 )
9 counts for 0
10 subtract 10
Jack, Queen, King = add 10
Joker $=20$

## FACE OFF

1. Split cards into 2 equal groups and give one set to each player
2. Each player turns over the 2 cards and adds them together
3. The player with the greatest sum wins all 4 cards
4. The game ends when one player has all the cards or a time limit such as 15 minutes is reached
Variations: This can be played with subtraction or multiplication as well

## Yahtzee

It's amazing what you can learn playing a seemingly simple game like Yahtzee. It's not just rolling the dice! In the game of Yahtzee you try to score the highest points by rolling a combination of numbers using 5 dice. These numbers are added up and the highest score wins.
In strategizing how to record your score you will need to use number recognition, prediction and statistics. In calculating your score you will need to use addition and multiplication would be helpful. To determine how many more point you will need to win you will need subtraction and often you will need to do these calculations quickly in your hear (or perhaps ask for help as you learn the game and develop your math facts skills).
Yahtzee is one of those unique games that can be played and enjoyed by people of all ages. A four or five year old can roll the dice and count up the numbers on the dice, while a college math major can work out complicated statistics and probability. It's a fun way to practice facts in a creative, hands-on way that can involve the whole family. The game is not expensive, can be easily found in thrift stores or if you find the rules online, all you really need are 5 dice and a score sheet.
TIP: Start by just using the top half of the score sheet and then add the bottom part once everyone is comfortable with the game.

## Speed Drill - individual practice

For practice of basic multiplication facts.
How to Play:

1. Flip over one card of the math drill you want to practice (Ex. 3)
2. Flip one card at a time from the remaining deck and multiply by 3
3. Try to go as fast as you can
4. Try another multiplier

## Multiplication Snap

Materials:
Cards (A-10), (J-Q for x to 11 and 12)
How to Play
Cards are divided into two piles. Cards 1-5 in one pile and 6-10 in another.
A card from each pile is turned over and the first player to answer the equation gets the cards.
Game continues until all the cards are gone.
The player with the most cards wins.
Variation:
Use only specific cards to work on a specific times table. Ex: Keep the 6 face up and each card chosen must be multiplied by 6

## 500

Materials: using an ordinary deck of cards, with the jokers removed, split the cards into 2 equal groups. Each player should have paper and pencil for scoring.

To start the play:
Player 1 turns over 2 cards, finds and records the product. Player 2 does the same.
Player one turns over 2 cards, finds the product and adds it to the previous total. Player 2 does the same.

- all cards count face value except the following:
- a deuce (2) forces the player to start again at 0 on the next turn
- face cards (J, Q, K) count 10
- aces count 11

To end the play:
Once a player gets to 500 and the other player has had an equal number of turns, the game ends.

## Variations:

All values can be increased by a power of 10 and the game can then be played to 50,000 Black cards can be assigned negative values and red positive values. The closest to zero at the end of the deck wins.

