## Pirates Enjoy Math <br> (Don't Say Arrrrrrithmetic)

## Components:

18 cards numbered 1-9 in five suits:


Add $=$


Subtract $=$


## Divide $=$



Note: For Divide, only the card with the Divide suit is the denominator. The other card is the numerator. Thus $2 \div$ and $8 x$ would have target Loot Values of 4 and 16. $2 \div$ and $1+$ would have target Loot Values of 0 and 3.

Exponents =
Multiply =



Note: For Exponents, only the card with the Exponent suit serves as the Exponent, thus $2^{\wedge}$ and $7+$ would have target Loot Values of 9 and 49.

## Overview:

Pirates get a bad rap for being nothing but thugs and brutes, but the truth is they need to be quick thinkers, and surprisingly good at math. How else do you think they can keep track of the value of their plunder? Sure, they may horde their plunder, or squander their treasure away is the seediest of places, but all of that takes an acute mathematical mind.

In Pirates Enjoy Math (Don't Say Arrrrrithmetic) each player takes on the role of a pirate captain sending his best crew in to pillage and plunder his rival pirates in an attempt to win the most Gold.

## Setup:

Shuffle all 18 cards and deal out 2 cards to each player (their Crew) and 2 face up (the Loot) in the middle. Players look at the Loot and determine the target Loot Value (see below). Each player should look at their two cards and choose one to keep. The other card is passed to the player on the left. Players then all draw one additional card, choose two from their hand to keep and pass the third to the left. Finally, players draw a fourth card and again choose three in their hand to keep and one to pass to the left. Each player should now have a hand of 4 cards. This means not all cards will be used in 2-3 player games.

Rotate dealers clockwise. Change between passing cards left, right, across, and keeping cards on different hands.

## The Loot:

The two face up cards indicate the Spoils available for plunder. Each card will show a value in Gold doubloons and a cards icon with a mathematical operator. The target Loot Value is a positive whole number that can be reached by performing one of the two operators on the two numbers displayed. E.g. if the Loot contains a 2 of Exponents and a 7 of Multiply then the target Loot Value is either a 49 or a 14.

The Spoils available is the sum of the Loot cards, so in the example above the Spoils available would be 9 Gold.
Note: If one or more of the Loot cards' suits is Divide only the quotient counts, thus a 3 of Divide and an 8 of Multiply would result in target Loot Values of 2 and 24 with Spoils of 11 . A 2 of Divide and 7 of Add would result in target Loot Values of 3 and 9 with Spoils of 9.

## Object:

Players will attempt to play three cards from their hand closest to the target Loot Value. The player that dealt the cards chooses High or Low. The word chosen will be used to compare the remaining $4^{\text {th }}$ card in players' hands to break ties and earn bonus Spoils.

Players take a few seconds to decide on three cards to use in a mathematical formula, using parentheses, exponents, multiplication, division, subtraction, and addition, which will give a Crew Value closest to one of the target Loot Values. Once a player has decided on his three cards he should place them face down in front of him. Players will then take turns revealing their three cards and explaining the mathematical formula in clockwise order starting with the dealer. Their Scores will be the difference between the target Loot Value they were aiming for and their Crew Value. The lowest Score wins the hand.

In the event of a tie, the player with the highest Crew Value wins. If there is still a tie the player with the remaining card that is either High or Low, as shouted at the beginning of the hand wins. In the event that there is still a tie if a player's remaining card matches the suit of one of the Loot cards he wins. In the event that there is still a tie (e.g. if neither player's remaining card matches the suit of a Loot card) both players win and both get the full value of the Spoils.

Note: Crew Values are not rounded. But during the scoring phase any Score is rounded up. Thus a Score of . 5 would lose the pirate 1 Gold.

## Scoring:

The winner receives Gold equal to the sum of the Loot cards (the Spoils Value). All players lose the value of their Score. The player that has the Highest or Lowest remainder card, according to the word chosen at the beginning of the hand, gets another +1 bonus Gold. All players receive bonus Gold for the number of digits that their answer was.

Play until one player reaches an agreed upon amount of Gold (29 is recommended, since it is prime).
You may use paper and pencil to keep track of Gold, but not to make calculations, unless agreed to before the game, or to settle disputes.

Note: Division is only rounded down in the Loot Value, but the Gold a player may lose when scoring is always rounded up. But if he used ( $\left.6^{\wedge} 3\right) / 7$ his Crew Value would be $30.86 \ldots$ and if the Loot Value was 28 he’d have a difference of 2.86 and lose 3 Gold.

## Example:

## The Loot:



Target Loot Values are:
$3 \times 6=18$
$6^{3}=216$

Player 1 Hand:


Closest Crew Values:

$$
\begin{aligned}
& 7 \times 2+4=18 \\
& \text { or } \\
& (4+2)^{3}=216
\end{aligned}
$$

Player 1 chooses "Low".

Player 2 Hand:


Closest Crew Value:

$$
8+1+9=18
$$

Player 3 Hand:
为


ロ
Closest:
$5 \times 4-1=19$
Player 4 Hand:

| 튼 |
| :--- |
| $\square+$ |



Closest:

$$
6^{(8.5)}=216
$$

Player 1 plays $7 \times 2+4=18$ for an exact match with a 3 left over (player 1 didn't notice the other combination to get a Crew Value of 216).

Player 2 plays $8+1+9=18$ for an exact match with a 2 left over.

Player 3 plays 5x4-1 = 19 for a difference of 1 with a 7 left over.
Player 4 plays $6^{(8-5)}=216$ for an exact match with a 9 left over.
Player 4 would win this hand because he played cards with the highest Crew Value and had an exact match. Player 4 would earn 9 points in Spoils, plus a 3 point bonus for making a 3 digit number for a total of 12 Gold.

Player 2 would come in second place, earning 3 Gold for an exact match of a 2 digit number AND having the lowest remainder card since 'Low' was announced by Player 1.

Player 1 would earn 2 Gold for having an exact match of a 2 digit number (he could have earned 12 Gold instead had he noticed the combination to get a Crew Value of 216).

Player 3 would earn 1 Gold for creating a 2 digit number, but being off by 1 .

## Credits

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Special Thanks: Julie Zaborac, Mike Jaros, Sam Jaros
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