

GET TO 1000

Players in pairs, take turns rolling a die. On each roll, each player decides separately whether he wants to multiply the number on the die by 1, 10, or 100.

Each player records the resulting product on a piece of paper.

Players continue to roll, multiply and record until they have 10 products on their paper. (Each player will have rolled the die 5 times.)

Each player finds the sum of his products. The one with the final score closest to 1000 is the winner.

version A: multiply by 1, 5, or 50

version B: multiply by 10, 25, or 50

Pig Out

2 players

YOU NEED

- 2 octahedrons, numbered 1-8
- 1 score sheet per player

RULES

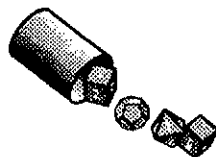
The first player to reach 100 wins.

1. Decide who goes first. Take turns.
2. Roll both octahedrons. Write the numbers and their sum on your score sheet.
3. If you choose, you can stop and end the round. Or, you can roll again and add the new sum to your previous score. But don't *pig out*. If you roll 1 on one octahedron, you lose all your points for that round. If you roll 1 on both octahedrons, your total score goes back to 0, even if your score is 99.
4. Any time you roll a 1, your turn is over.
5. Circle your score at the end of each round.
6. Take turns repeating steps 2-5.

Play the game at least three times.

SAMPLE ROUNDS

Points per roll	Roll	Score	
7	3,4	7	
10	4,6	17	
4	2,2	(21)	— end of round 1
12	6,6	(33)	— end of round 2
7	3,4	40	
0	1,5	(33)	— end of round 3
0	1,1	(0)	— end of round 4



WORKING TOGETHER

- ◆ Discuss the strategies you used. Write about the strategy you think is best.
- ◆ Make up a new rule for rolling 1 on both octahedrons. Play with your new rule. Discuss how the new rule changed your strategy.

Fun With Playing Cards

Mental Math

Students remove the tens and picture cards in their deck of cards. The teacher selects 2 cards to form a 2-digit number and shows the number to the students. The students are dealt 4 cards each from their deck, face down. Players must arrange their cards to form a 2-digit subtraction problem. The goal is to get as close to the target number (teacher's number) as possible. When the game is over, students are asked to explain the strategy they used.

Target number = 52

Students might arrange cards 1, 2, 5, 7 to form the following subtraction problem:

7	5
2	1

54 is close to the target number!

Challenge:

Use 3-digit numbers and deal 6 cards to each player for a more difficult game.

Or - Ask students to use operations (add, subtract, multiply, or divide) to get as close as possible to the target number - ie. $7 \times 5 + 21 = 56$ or $7(5+2) + 1 = 50$.

Comparing Numbers

Ask students to work with a partner. Deal six cards to each pair and have them make two 3-digit numbers (or larger numbers, if appropriate). Have students justify which number is larger?

Speaking About Cards

Reinforce math vocabulary by asking students to answer questions about a hand of cards. Display five cards. Ask students to answer questions like the following:

- What fraction of the cards are red?
- What percentage of the cards are odd?
- What is the product of the cards that are black?
- What fraction of the cards are factors of 18?
- What is the sum of all five cards rounded to the nearest ten?
- What is the average of all five cards?
- What is the percentage of cards that are prime numbers?

Can You Make 1000?

Materials:

Deck of playing cards with face cards removed
Paper and pencil

Play:

- ♣ Shuffle cards and deal 8 to each player.
- ♦ Each player must use 6 of his/her cards to make two 3-digit numbers. The goal is to make the *sum* of the two numbers as close as possible to 1000 (it doesn't matter if you are over or under 1000).
- ♥ Each player's score is the difference between his/her number and 1000 (that is, someone whose sum is 996 would have a score of 4 and someone whose sum is 1013 would have a score of 13).
- ♠ Play for five turns and total each player's score. Player with the lowest score wins.

Variations:

- ♣ Include jokers and use them as "0"
- ♦ Score -3 for 997 and +3 for 1003, etc. How does that affect your strategy?
- ♥ Write the digits 0 - 9 on tiles and put a sufficient quantity in a grab bag. Each player takes 8 tiles from the bag.
- ♠ Use a 10-sided die to roll 8 digits (more prone to shady practices than cards)
- ♣ Use 6 cards each and make two 2-digit numbers to try to get a sum close to 100 for younger children.