Math-O-Matics!

Primary Objectives:

Students will:

- Practice grade-level appropriate math skills.
- Develop mathematical reasoning.
- Move flexibly between concrete and abstract representations of mathematical ideas in order to solve problems, model mathematical ideas, and communicate solution strategies.

Examples of **Possible** Academic Standards to Incorporate:

Kindergarten:

- 6.2.1 Count objects in a set and use numbers, including written numerals to 25.
- 6.2.5 Model the numbers 1 through 10 as sums or differences of different sets of whole numbers (composing and decomposing numbers).
- 6.2.10 Recognize 6 through 10 as "five and some ones."
- 6.2.13 Add and subtract single-digit numbers whose total or difference is between 0 and 10.
- 6.2.14 Understand add as "put together" or "count on" and solve addition problems with sums less than 20.
- 6.2.15 Understand subtraction as "break apart" or "take away" and solve subtraction problems using numbers 1 through 10.
- 6.2.17 Understand that numbers can be represented by different groupings.

1st Grade:

- 6.1.8 Recognize the "word clues" and mathematical symbols for addition and subtraction.
- 6.2.3 Develop strategies for learning basic addition facts and related subtraction facts.
- 6.2.4 Use multiple representations (including groups of ten) to model two-digit addition and subtraction.

- 6.2.8 Relate "counting on" and "counting back" to addition and subtraction and understand them as inverse operations.
- 6.2.9 Add three single-digit numbers.
- 6.2.12 Use various models to develop strategies for solving arithmetic problems.
- 6.2.13 Solve problems that require addition and subtraction of numbers through 100.

2nd Grade

- 6.2.7 Develop fluency at recalling basic addition facts and related subtraction facts.
- 6.2.8 Use efficient procedures, and understand why they work, to solve problems involving the addition and subtraction of two- and three-digit whole numbers (including those that require regrouping for addition only).
- 6.2.9 Apply appropriate methods to estimate and mentally calculate sums or differences with ones, tens, and hundreds.
- 6.2.10 Add three two-digit numbers.
- 6.2.11 Solve addition and subtraction problems in context using various representations.

3rd Grade

- 6.2.2 Develop understanding of multiplication and related division facts through multiple strategies and representations.
- 6.2.4 Solve multiplication and division problems using various representations.
- 6.2.4 Use a variety of methods to perform mental computations and compare the efficiency of those methods.
- 6.2.1 Read and write numbers up to 10,000 in numerals and up to 1,000 in words.
- 6.2.5 Identify various representations of multiplication and division.
- 6.2.6 Recall basic multiplication facts through 10 times10 and the related division facts.
- 6.2.7 Compute multiplication problems that involve multiples of ten using basic number facts.
- 6.2.8 Solve problems that involve the inverse relationship between multiplication and division.
- 6.2.9 Solve contextual problems involving the addition (with and without regrouping) and subtraction (with and without regrouping) of two- and three digit whole numbers.

4th Grade

- 6.2.6 Solve problems involving whole numbers, fractions, and/or decimals using all four arithmetic operations.
- 6.2.3 Multiply two- and three-digit whole numbers.
- 6.2.6 Divide three-digit whole numbers by one-digit divisors fluently with pencil and paper.
- 6.2.13 Solve multi-step problems of various types using whole numbers, fractions, and decimals.
- 6.2.12 Solve problems using whole number division with one- or two-digit divisors.
- 6.2.11 Solve problems using whole number multi-digit multiplication.

5th Grade

- 6.2.3 Develop fluency with division of whole numbers. Understand the relationship of divisor, dividend, and quotient in terms of multiplication and division.
- 6.2.6 Add and subtract mixed numbers.
- 6.2.7 Understand the placement of the decimal point in calculations of multiplication and long division, including the placement in the estimation of the answer.
- 6.2.1 Read and write numbers from millions to millionths in various contexts.
- 6.2.4 Solve problems involving the division of two- and three-digit whole numbers by one- and two-digit whole numbers.

6th Grade

- 6.2.1 Understand and explain the procedures for multiplication and division of fractions, mixed numbers, whole numbers, and decimals.
- 6.2.2 Solve multi-step mathematical, contextual and verbal problems using fractions, mixed numbers, whole numbers, and decimals.

7th Grade

- 6.2.1 Extend understandings of addition, subtraction, multiplication and division to integers.
- 6.2.15 Report results of calculations appropriately in a given context (i.e. using rules of rounding, degree of accuracy, and/or significant digits).
- 6.2.5 Solve contextual problems that involve operations with integers.
- 6.1.2 Apply and adapt a variety of appropriate strategies to problem solving, including estimation, and reasonableness of the solution.

- 6.1.1 Use mathematical language, symbols, and definitions while developing mathematical reasoning.

8th Grade

- 6.1.2 Apply and adapt a variety of appropriate strategies to problem solving, including estimation, and reasonableness of the solution.
- 6.1.1 Use mathematical language, symbols, and definitions while developing mathematical reasoning.
- 6.1.5 Use mathematical ideas and processes in different settings to formulate patterns, analyze graphs, set up and solve problems and interpret solutions.
- 6.1.6 Read and interpret the language of mathematics and use written/oral communication to express mathematical ideas precisely.
- 6.1.8 Use a variety of methods to solve real-world problems involving multi-step linear equations (e.g., manipulatives, technology, pencil and paper).

Examples of **Possible** Math Academic Vocabulary to Incorporate:

3rd Grade:

- Conclusion
- Conjecture
- Decimal
- Denominator (like, unlike)
- Division

- Divisor
- Factor
- Frequency
- Multiples
- Numerator
- Product

- Quotient
- Reasonableness
- Fraction

4th Grade:

- Accuracy
- Chance
- Common fraction
- Computation
- Convert

- Expression
- Improper fraction
- Mixed number
- Prime
- Probability

- Proper fraction
- Relationship
- Remainder
- Right

5th Grade:

- Exponent
- Exponential notation

- Formula
- Inequality
- Model

- Natural numbers
- Numerical data

- Order of operations
- Rational numbers
- Remainder

- Round
- Significant digits
- Solution
- Undefined

- Variable
- View

6th Grade:

- Base (of exponent)
- Circumference
- Negative

- Percent
- Random
- Sample
- Similarity

- Simple event
- Simulation

7th Grade:

- Absolute value
- Function
- Least common multiple

- Linear equation
- Negative exponents
- Property

- Scientific notation
- Square root

8th Grade:

- Infinite
- Monomial
- Polynomial
- Sequence
- Deductive and inductive reasoning
- Simulation

Use the following games to help students practice the following grade-level appropriate math skills.

Note: Some skills are in **bold** to help you see which skills are repeated in multiple age groups and grades, and so can be worked on with multiple age-groups.

2nd Graders:
- Adding and subtracting with numbers and pictures
- Adding and subtracting multiples of 100
- Adding and subtracting two three-digit numbers
- word problems
- Adding and subtracting three or more numbers
- The numbers **1-20**
- Subtracting multiples of 10
- Adding one and two digit numbers for sums up to 20

3rd Graders:
- Adding three or more numbers up to three digits each
- Adding two numbers with four or more digits
- Adding two numbers with four or more digits
- **Working on multiplication and division facts up to 12**

4th Graders:
- **Practicing multiplication and division facts to 12**
- **Multiply 1 digit numbers by larger numbers.**
- Multiplying two digit numbers by two digit numbers.
- Divide larger numbers with one digit divisors.
- Divide by two digit numbers.

5th Graders:
- Add and subtract decimal numbers
- **Multiplication facts to 12**
- **Multiply by 1-digit numbers**
- Multiply numbers ending in zeroes
- Multiply by 3-digit numbers
- Multiply three numbers up to 3 digits each
- **Division facts to 12**
- Divide multi-digit numbers by 1-digit numbers
- Divide numbers ending in zeroes
- Divide by 2-digit numbers
- Add, subtract, multiply, and divide whole numbers
- Reduce fractions to simplest form (Ex. Write 4/10 in simplest form)

6th Grade:
- Add, subtract, multiply, and divide money amounts
- Add and subtract decimals and whole numbers

- **Multiply whole numbers, numbers ending in zero, and whole numbers with four or more digits**
- Divide whole numbers, numbers ending in zero, and whole numbers with 2 to 3 digit divisors
- Multiply and divide decimals
- **Add, subtract, multiply, and divide whole numbers.**
- Add and subtract fractions with like or unlike denominators
- Reduce fractions to simplest form (Ex. Write 4/10 in simplest form)

7th Grade:
- Add and subtract multiply and divide decimals.
- Add, subtract, multiply, and divide money amounts, ex. Word problems.
- Estimate to solve word problems
- Simplify fractions
- Find the least common denominator
- Reduce fractions to simplest form (Ex. Write 4/10 in simplest form)

8th Grade and higher:
- Add and subtract integers (using counters or not using counters) Ex. 2- -1=?
- **Multiply and divide integers (-6 x -5 =?)**
- Simplify fractions
- Find the least common denominator
- Add, subtract, multiply, and divide rational numbers

Huddle Up!

This is a really simple game that is often played in Japan. It's best played in the gym, and is best with many (tens to several hundred) players!

1. All the kids run round the gym in a big circle
2. The teacher calls out a number.
3. The kids have to stop and make groups that contain this number of people. For example if there are 11 students and the teacher said "3", then the kids get in groups of 3.
4. When they get all the members of their team they sit down. Those who are not in a group of that number are out.
5. Repeat from 1

Note: The traditional Japanese way of playing this game is to shout a word and the kids form groups according to how many syllables it has (e.g. groups of 3 if you say the word "computer"). You could also try shouting out a sum e.g 12 - 7 = ? or 12 / 2=?. You can vary the game by setting a time limit of ten seconds and any people who are not in a group by that time are out.

Team Tag

 The Teacher will divide the students into two groups and have them form two single file lines facing forward. The first student should be about 10 feet from the front of the room. Put two equal stacks of flash cards on a desk in the front of the room. When play starts, the first person in line races to the desk, takes the first card in his or her pile, holds it up, announces the answer to the class, places the card in a discard pile, and then races to tag the next person in line. If the student does not know the answer or gives the wrong answer, he or she puts the card on the bottom of the pile and selects the next card. On the third card they pull their team can help them with the answer.

The two teams play simultaneously. The first team to correctly give the answer to all the multiplication facts in its pile wins.

MATH-O

How to Play

1. The Teacher will cut out the "balls", actually paper squares that will be picked out of a box by the caller, and be sure to write the answers on the back. Put the balls in a cardboard box with a cover (a shoe box works well). Cut a hole in the lid that's large enough for the caller to fit her hand in and pull out a ball without seeing it.

2. The Teacher will give each player a card and decide what to use for markers. Pennies or buttons work well, but cereal (such as Cheerios) or jelly beans add to the fun.

3. Players cover their free squares with a marker, and the caller (who usually does not play) picks a ball from the box and reads it out loud ("M eight minus five," for example).

TIP FOR CALLER: Set aside balls you've called so that the winner's answers can be checked.

3. The players search the column named for the answer, and when they find it, they cover that space with a marker. The first player with five horizontally, vertically or diagonally shouts "Math-O" and is the winner.

TIPS: Simplify the game for younger students by using simpler mathematics problems or by simply calling the column and number so students may work on number recognition.

Increase the difficulty of the game by making up problems that require adding more than one number or dividing or multiplying.

The Teacher/caller may want to write a more challenging problem on the board, and work it out after 15-20 seconds, or have students use scrap sheets of paper to work problems.

MATHO

M	A	T	H	O
4	12	18	24	30
2	8	13	20	25
5	11	FREE	19	27
6	10	17	23	26
3	7	14	21	28

MATHO

M	A	T	H	O
1	12	18	20	27
3	11	14	22	30
2	9	FREE	24	25
6	7	13	19	29
5	8	17	23	26

MATHO

M	A	T	H	O
5	7	14	19	28
4	9	18	22	25
1	11	FREE	24	30
3	8	16	21	27
2	12	13	20	26

MATHO

M	A	T	H	O
6	10	16	22	30
3	12	13	19	28
1	7	FREE	24	25
4	9	15	21	27
2	11	14	23	29

M	M	A	A	T	T	H	H	O	O
2-1	0+1	3+4	5+2	11+2	4+9	21-2	17+2	20+5	30-5
15-14	24-23	14-7	26-19	15-2	6+7	22-3	16+3	18+7	26-1
2+0	4-2	4+4	1+7	7+7	9+5	20-0	22-2	23+3	28-2
14-12	10-8	28-20	17-9	20-6	10+4	15+5	6+14	11+15	17+9
6-3	2+1	5+4	3+6	20-5	9+6	11+10	14+7	28-1	30-3
17-14	29-26	18-9	30-21	25-10	3+12	30-9	22-1	6+21	14+13
9-5	3+1	10-0	6+4	8+8	9+7	9+13	25-3	14+14	23+5
24-20	8-4	15-5	11-1	28-12	4+12	27-5	12+10	30-2	0+28
2+3	7-2	13-2	22-11	16+1	6+11	17+6	20+3	26+3	30-1
21-17	29-24	9+2	4+7	13+4	12+5	28-5	15+8	6+23	14+15
12-6	3+3	6+6	24-12	25-7	2+16	22+2	30-6	29+1	8+22
17-11	4+2	9+3	5+7	9+9	10+8	16+8	27-3	17+13	30-1
1+1	24-20	12-4	5+6	30-17	5+10	19-0	21-1	25+5	25+3
20-17	9-3	6+5	11+1	20-2	4+14	15+9	27-5	12+13	18+8

Get 20 (Deck of cards Game)

Invite your participants to get into groups of 4 or 5. Give each participant one card. Ask them to use any math function (addition, subtraction, multiplication and division) to get their cards into a sequence that would equal the number 20. For example, if one group had a cluster of cards that are these values: a King(10), Ace (1 or 11), 5, 6 and 8, the group would get into a line and explain to the group how they equal 20: a King plus an Ace would be 11, 11 plus 8 equals 19, 19 plus 6 equals 25. 25 minus 5 equals 20. Make sense? Occasionally you will have groups that will not be able to make their cards work for a value of 20. In this case I invite other groups to invite a 'card' to their group and make a new sequence. You can also switch up cards to keep the same group intact but with different cards.

Alternate Versions:

15!

To play the game
The cards are placed on the table (or floor) between the two players.
Players take turns to choose a card (any card they like) from the pile.
The winner is the first to have a set of three cards that add to 15.

> For example, if you drew 1,5,6 and 8, then you would win, because 1+6+8 is 15. Unless of course, I had my set of three first!

For younger children
For younger children, you could place the cards face down. Then they can concentrate on the arithmetic, since they can't see the numbers before they choose them. For older kids, it makes a more exciting game if the cards are face up.

Extra exciting!

To make it extra exciting for an older group, you could have a "15 game" class tournament! You could even make it span a whole semester, with league charts and so on pinned to the wall of the class.
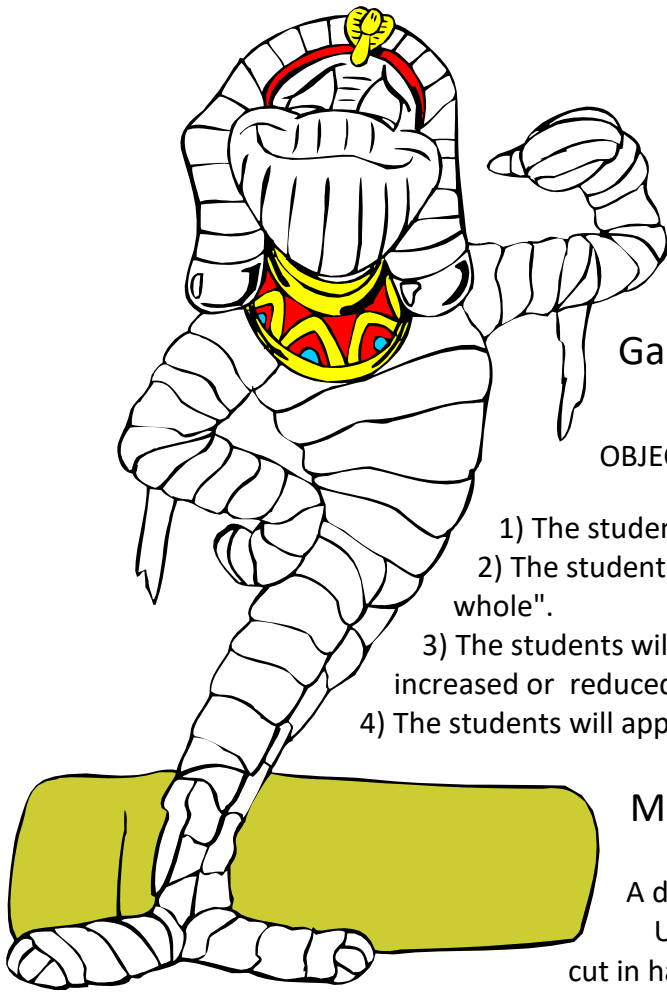
Mummy! Identification of Equivalent Fractions

(Modified Rummy = "Mummy" Card Game)

OBJECTIVES

1) The students will interpret the meaning of a fraction.

2) The students will identify the fractional representation for "one whole".

3) The students will recognize the renamed fraction after it has been increased or reduced.

4) The students will apply these skills in a "card game".

Materials

A deck of 52 fraction cards

Use the fraction cards printout or use 3 x 5 index cards cut in half to form 3 x 2 ½ and make your own. There are 13 sets of equivalent fractions.

```
2/4    3/6    4/8     8/16              1/5    2/10    3/15    4/20
2/6    3/9    4/12    6/18              5/8    10/16   15/24   20/32
4/6    6/9    8/12    10/15             1/9    2/18    3/27    4/36
1/4    2/8    3/12    4/16              2/5    4/10    6/15    8/20
3/4    6/8    9/12    12/16             3/8    6/16    9/24    12/32
1/8    2/16   3/24    4/32              3/5    6/10    9/15    12/20
                1/6    2/12   3/18    4/24
```

Cards should be labeled in alternating corners.

```
 _____
|6/10            |
|                |
|                |
|                |
|                |
|                |
|                |
|                |
|                |
|                |
|_____  01/9  |
```

How to Play:

Two to four players. Cards are dealt one at a time in a clockwise manner such that each player gets seven cards. The deck is placed in the center and a single card is turned up as a waste pile. Play continues around the group as in traditional rummy (taking a card and making a discard.) The object of the game is to get a group of either three or four cards that have the same equivalent and three or four cards with the same denominator.

```
  _____
 |1/4    ___|_____
 |      |2/8    ___|_____
 |      |      |3/12   ___|_____
 |      |      |      |4/16   ___|_____
 |      |      |      |      |1/9    ___|_____
 |      |      |      |      |      |3/9    ___|_____
 |____| |      |      |      |      |      |6/9        |
     |____| |      |      |      |      |      |
        |_____| |      |      |      |      |
           |____| |      |      |      |
              |____| |      |      |
                 |____| |      |
                    |_____ 9/6|
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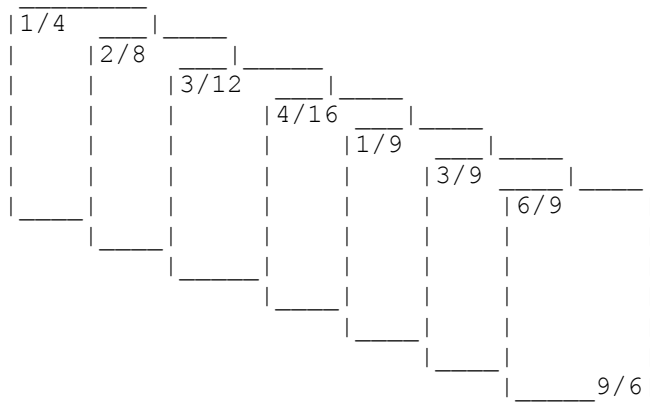
*Tips on Rummy Style Games: Both the deal and the gameplay pass clockwise (to the left) from player to player. The first turn of play is given to the player at the dealer's left, followed by the player at his left, and so on. **Dealing** - The dealer distributes the cards, one at a time, face down, beginning with the player on his left, and ending with himself, clockwise around the table.

The Stock - After the deal is complete, the remainder of the deck is placed face down in the center of the table, within reach of all players. This forms the stock.

The Upcard - Before play begins, the dealer turns over the top card of the stock and places it face up on the table next to the stock. This is the upcard.

Play - The player on the dealer's left has the first turn. Each player's turn must begin with a draw and end with a discard. A player may draw a single card from either the top fo the discard pile, or from the top of the stock.

In order to **win** in any of the Rummy variants, a player has to dispose of all their cards. In order to do this a player picks and discards cards, while forming the "kept" cards into stacks called "melds". Two meld types:

A set that consists of 3 or more cards ranking the same, or

A run, which consists of 3 or more consecutive cards of the same suit:

In this version the "melds" are a set of 3 equivalent fractions and a run of three cards with the same denominator.

A Set Makes "1"

(More Fractions Card Games)

Pass out 6 cards to each player. The goal...

- To make sets of cards which add up to 1.

For example, 1/2 + 2/4 is a set. So is 2/15 + 1/2 + 1/6 + 2/10 a set.

At the start...

- Give each player a piece of paper and a pencil.
- Shuffle the cards, and deal 6 cards to each player.
- Place the rest of the cards **face down** on the table. This is the **draw pile**

On each player's turn...

- The player draws two cards. These two cards can be both from the draw pile, **or** both from the *discard pile* (see below), or one from each.
- If a player has a set of cards that adds up to 1, they should take the set out of their hand, and place it face up in front of them. At the end of the round, they'll get points for each set they make.
- The player can use their paper and pencil to work out sums if he or she likes. However, calculators and outside help is forbidden!
- If a player did not make a set, the player must discard one card face-up onto the **discard pile** (next to the draw pile).

The end of a round...

- When a player finishes all his or her cards, the round is over.
- All the other players give their cards to that person (but they keep the 'sets' they have already laid on the table).
- Points are awarded as follows :
  - Each card is worth the sum of the numerator and the denominator. So the card with 3/5 would be worth 8 points, and 2/10 would be worth 12 points.
  - 'Wild' cards are worth 1 point each.
- The round can also end if there are no more cards to draw. Then, each player just gets the points for the 'sets' they have laid out in front of them.

Wild Cards...

- The **X** of the wild card can count as any positive whole number, but not equal to the denominator.
- So X/15 could be 3/15, or 8/15, or 2/15.
- However, it can't be (2.5)/15 or 15/15, or 0/15.

Remember, at the end of the round, wild cards are only worth 1 point!

You might like to vary the rules. Feel free! Here's a few suggestions.

- In the rules above, sets are formed by addition of fractions only. You could also allow subtraction using the red cards. So a blue 2/3, a blue 1/2, and a blue 1/6 could not form a set, but So a blue 2/3, a blue 1/2, and a red 1/6 could. So could a blue 5/6 and a red 1/6 - that's right, the red cards can be used for addition *or* subtraction.
- Instead of allowing each player their own piece of paper for scrap working, everyone shares one piece of paper... Yes, that's right, they can see each other's working out!
- Of course, there's many other ways to vary the rules - and even many other games you could play with these cards!

Trash Can Math!

In this game we're going to practice basic math skills while we play.

This game gets students involved as a team while allowing them a chance to throw the ball 'in the hoop'.

3. Buy or make a small (3-4 inches diameter) ball. An easy one to make is simply a paper wad surrounded by a few layers of masking tape.

4. Set up the room with two small (clean) garbage cans in the front. These will be the baskets.

6. Place a piece of masking tape on the floor approximately 3 feet from each basket and another approximately 8 feet from the basket (Adjust the length depending on the size and abilities of your students.)

7. Divide the students into two teams.

8. Explain that each student must answer the questions given to them, easy and hard problems will be evenly interspersed.

9. Keep score for each team. Questions are worth 2 points each.

10. Regardless of whether they get the question correct each team's player will have a chance to shoot for two 'extra points'. They will shoot first from the tape mark that is closest to the basket and then the one furthest from the basket, for a possible 2 points if both baskets are made.

Note: Make sure that you make it clear that anyone making fun of another student will cause their team to lose points.

Variations:
- Students can also play using fingers or objects (beans, cereal, etc) on the table, a set for each competitor. They have to move the objects into groups to solve the problems (Ex. 5-3 = ?)
- Have whole group competitions where the students have to draw the correct answer. Ex. Draw eight squares! The first students to finish (correctly) moves forward a spot.

Who wants to be a Mathionaire?

Test your skills, make a million!
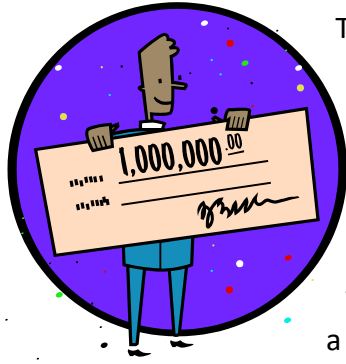
This math game is based on the popular game show 'Who Wants to be a Millionaire?' The Teacher is the Host of this game and will divide the students into two teams. Each team will send up a different player to represent them during each level of play. The Host will rotate between the two teams, asking questions from the included cards, or, if additional questions are needed, with flash cards, verbally giving multiple choices if needed.

The Team that wins is the one that gets to $1,000,000 dollars first. If a Team misses a question they continue to play but must start back at $100, losing all money they had gained up to that point. If this happens the Teacher will remind the students that the other team may miss a question as well, so it is better to keep playing, than to give up.

Help Options: These are limited and may only be used the designated number of times during the rounds of play. (Of course, vary them as you deem necessary according to your students and their abilities.)

- Phone a Friend: (May be used one time, by one player on each team during the round. The student may ask the Teacher what their response would be for the question.

- Ask the Audience: (May be used twice during the round by each team) The playing student may ask their teammates what their response would be for the question by having them raise their hands for A, B, C, or D and use their responses to aid them in answering.

- 50/50: (May be used one time, by one player on each team during the round) The Teacher will tell the student two of the answers that are not right, leaving the correct answer and one incorrect answer for the student to choose from.

Levels of Money

- Level One: $100
- Level Two: $200
- Level Three: $500
- Level Four: $1,000
- Level Five: $2,000
- Level Six: $4,000
- Level Seven: $8,000
- Level Eight: $16,000
- Level Nine: $32,000
- Level Ten: $64,000
- Level Twelve: $125,000
- Level Thirteen: $250,000
- Level Fourteen: $500,000
- Level Fifteen: $1,000,000

What is 6÷2?

A. 3   B. 4

C. 8   D. 12

What is 8÷4?

A. 12   B. 4

C. 32   D. 2

What is 16÷2?

A.18   B. 14

C.8   D. 32

What is 7÷1?

A.6   B. 7

C.8   D. 71

What is 4÷1?

A. 2   B. 4

C. 1   D. 5

What is ÷0?

A. 20   B. 0

C. 10   D. 1

What is 10÷2?

A. 20   B. 5

C. 12   D. 8

What is 9÷3?

A. 27   B. 6

C. 12   D. 3

What is 5÷1?

A. 6   B. 5

C. 4   D. 10

What is 6÷3?

A. 2   B. 9

C. 18   D. 3

What is 14÷7?

A. 2   B. 6

C. 21   D. 8

What is 15÷3?

A. 12   B. 5

C. 2   D. 18

What is 0÷0?

A.20 B. 0

C.10 D. 1

What is 20÷2?

A.22 B. 18

C.10 D. 40

What is 2÷1?

A.2

B.0

C.21

D.1

What is 12÷2?

A.10

B.6

C.24

D.12

What is 2-1?

A.2   B.0

C.21   D.1

What is 16-2?

A.14   B. 18

C.8   D. 32

What is 7-5?

A.2

B. 2

C.30

D. 13

What is 12-4?

A.16

B. 8

C.48

D. 3

What is 15-5?

A.10

B.7

C.20

D.9

What is 9-8?

A.2

B. 17

C.63

D. 1

What is 20-10?

A.30   B. 9

C.10   D. 8

What is 6-1?

A.5   B. 6

C.61   D. 7

What is 7-3?

A.5

B. 10

C.21

D. 4

What is 13-8?

A.21

B. 6

C.5

D. 24

What is 10-8?

A. 2   B. 18

C. 80   D. 7

What is 4-0?

A. 0   B. 4

C. 40   D. 3

What is 8-7?

A.4

B. 56

C.1

D. 6

What is 16-6?

A.22

B. 1

C.8

D. 10

What is 10-2?

A.20 B. 8

C.12 D. 7

What is 19-5?

A.4 B. 24

C.14 D. 13

What is 5+7?

A.11   B. 2

C.12   D. 35

What is 3+3?

A.6   B. 7

C.9   D. 33

What is 1+4?

A.3

B. 14

C.4

D. 5

What is 15+4?

A.11

B. 19

C.45

D. 40

What is 19+4?

A.25   B. 23

C.15   D. 42

What is 0+4?

A.0   B. 40

C.4   D. 5

What is 9+7?

A.2   B. 97

C.63   D. 16

What is 3+12?

A.15   B. 4

C.9   D. 36

What is 11+11?

A.13   B. 111

C. 0   D. 22

What is 4+16?

A.12   B. 20

C. 56   D. 10

What is 1+11?

A.12   B. 111

C.11   D. 22

What is 20+24?

A.38   B. 44

C.54   D. 4

What is 5+5?

A.13   B. 10

C.11   D. 25

What is 0+7?

A.0   B. 70

C.7   D. 9

What is 2+2?

A.3   B. 4

C. 14   D. 1

What is 4+3?

A.6   B. 17

C. 7   D. 8

What is 4+8?

A. 32   B. 4

C. 12   D. 11

What is 8+6?

A. 17   B. 14

C. 2   D. 15

What is 6+11?

A. 17   B. 37

C. 7   D. 11

What is 9+8?

A. 18   B. 14

C. 1   D. 17

What is 3x3?

A.6　　　　　　B. 33

C. 3　　　　　　D. 9

What is 10x12?

A.22　　　　　　B. 122

C.120　　　　　　D. 12

What is 5x7?

A. 55   B. 35

C. 25   D. 12

What is 4x4?

A. 16   B. 8

C. 20   D. 17

What is 7x7?

A. 42   B. 14

C. 49   D. 0

What is 6x6?

A. 13   B. 36

C. 22   D. 37

What is 8x14?

A. 112   B. 75

C. 22   D. 102

What is 2x2?

A. 4   B. 6

C. 22   D. 10

What is 8x9?

A. 82 B. 75

C. 72 D. 17

What is 11x7?

A. 97 B. 70

C. 18 D. 77

What is 6x10?

A. 50   B. 63

C. 60   D. 54

What is 9x11?

A. 102   B. 109

C. 99   D. 95

What is 5x5?

A. 45   B. 25

C. 26   D. 18

What is 3x8?

A. 11   B. 27

C. 24   D. 5

What is 8x5?

A. 39   B. 30

C. 60   D. 40

What is 6x6?

A. 30   B. 36

C. 37   D. 46

What is 6x7?

A. 32   B. 52

C. 42   D. 43

What is 9x9?

A. 82   B. 180

C. 81   D. 91

What is 3x5?

A. 14   B. 16

C. 9   D. 15

What is 4x5?

A. 20   B. 10

C. 30   D. 21

What is 2x3?

A. 26   B. 16

C. 6   D. 8

What is 4x3?

A. 11   B. 12

C. 13   D. 2