# Family Math Games

Great ways to learn at home with your kindergarten through grade 3 kids!

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The contents of this file were presented at the MRH Family Math Night on February, 28, 2011.
TUG OF WAR
Pre-School

Materials
• Counters/markers
• Dice
• Gameboard (see below)

How to Play:
1. Place the counter on the smile in the center of the gameboard.
2. Player 1 rolls the dice and moves the counter to the right.
3. Player 2 rolls the dice and moves the counter to the left.
4. The first person to get the counter to the edge of their gameboard wins!

We want the student to learn:
- One-to-one tagging
- One-to-one correspondence
- Counting
- Cardinality
FLIP AND ROLL

2 players
Kindergarten

What you need:
- Flip and Roll game board (math bag)
- number cards 1-12 (math bag)
- 1 dot die (math bag)
- paper and pencil for recording

Directions for playing
- Put the cards in a pile face down.
- Flip over a card from the pile put it in the first box on your game board.
- Roll the die and put it in the smaller box
- Figure out the answer.

*Encourage your child to “count on” to figure out the answer. For example if you flip a 4 and roll a 3, DON’T have your child put up 4 fingers and 3 fingers and then count all the fingers, instead encourage your child to start at 4 and count on, 4, 5, 6, 7. They can touch the dots on the die for additional support in counting on.

- Then write the number model on a piece of paper. For example if you flip over a 4 and roll a 3 you would write: \(4 + 3 = 7\)
- Work together until there are no more cards in your draw pile!

What is the math behind this game?
- Recognizing numbers and patterns of a die face
- Counting on, an important early number strategy
- Beginning to recognize number models and maybe moving into quickly knowing math facts.
GEL BAG NUMBERS
Kindergarten

Materials
  o Gel bags (made at math night)
  o Number cards or pencil and paper

Directions:
  o Ask your child to write a number with their finger on the gel bag. If they are having difficulty model writing the number on a piece of paper or show a number card.
  * Focus on teen numbers, as these are usually the most difficult for children to write.

What is the math in this game?
  o A fun way to have children practice writing their numbers.
CAPTURE TEN

2 PLAYERS

1ST GRADE

Capture 10 provides opportunities to make equations. It supports the making ten strategy – an important strategy for automatizing the basic facts. For example: 9+6 is much easier to recall when a child thinks of it as being equivalent to 10+5.

Directions:

• Children play in pairs.
• Place cards facedown in the center.
• Each player turns over a number card.
• Together the players determine the sum of the cards and determine which box the equation belongs. (For example: 8+5=13 belongs in the 10+3 box)
• If the sum of the two cards is less than 10 players put the cards back in the deck and reshuffle.

Materials Needed:

• Deck of cards
• Recording sheet
Appendix G

Number cards (Set I)

Make four copies. Cut out each card to make a set of 40 cards.
<table>
<thead>
<tr>
<th>10+1</th>
<th>10+2</th>
<th>10+3</th>
<th>10+4</th>
<th>10+5</th>
<th>10+6</th>
<th>10+7</th>
<th>10+8</th>
<th>10+9</th>
<th>10+10</th>
</tr>
</thead>
</table>

ROLLING FOR TENS

2 PLAYERS

1st GRADE

Rolling for Tens promotes the exploration of equivalence and combinations that make ten. The object of the game is to use all the cubes rolled to make 10 in a variety of ways. A pair’s score is based on the quantity that remains. To obtain the lowest possible score, a pair of players needs to consider a variety of ways to make 10. This build-in incentive pushes children to think about a variety of equivalent expressions.

Directions:
• Children play in pairs.
• Each pair has 20 number cubes in a cup.
• Roll all 20 number cubes.
• Figure out all the different ways to make 10.
• The numbers that are not used to become 10 are added and become the score of the pair for the round.

Goal: Achieve the lowest possible score

Materials needed:
• 20 number cubes per pair of children
• Small cups/plastic bags
• Recording sheet (appendix x) per pair of children
Appendix X  

Student recording sheet for Rolling for Tens

<table>
<thead>
<tr>
<th>How We Made 10</th>
<th>Cubes Not Used</th>
<th>Score for Round</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tbody>
</table>

Total Score:
PLUS 1 OR 2 BINGO

2 players
1\textsuperscript{st}/2\textsuperscript{nd} GRADE

This game is good for practicing early math facts involving adding one or two.

Materials: deck of Primary Number Cards (Without Wild Cards), 2 kinds of counters (20 per player), gameboard

Directions:
1. Player 1 turns over the top card in the deck.
2. Player 2 adds 1 or 2 to that number, and covers the sum on the gameboard.
3. Player 2 turns over the top card.
4. Player 2 adds 1 or 2 to that number, and covers the sum on the gameboard.
5. Keep taking turns. If all of the possible sums are covered, take another card.
6. The game is over when all of the numbers in one row are covered. The numbers can go horizontal (across), vertical (up & down), or diagonally (corner to corner).

More Ways to Play:
- Play with Wild Cards. Wild Cards can be any number.
- Play to fill more than one row.
- Play as a team. Try to fill the entire gameboard.
### Plus 1 or 2 BINGO Gameboard

<table>
<thead>
<tr>
<th></th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>4</th>
<th>6</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>6</td>
<td>3</td>
<td>5</td>
<td>4</td>
<td>8</td>
<td></td>
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<tr>
<td>3</td>
<td>8</td>
<td>2</td>
<td>9</td>
<td>1</td>
<td>4</td>
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<tr>
<td>8</td>
<td>6</td>
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<tr>
<td>9</td>
<td>10</td>
<td>7</td>
<td>12</td>
<td>5</td>
<td>7</td>
<td></td>
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<tr>
<td>3</td>
<td>8</td>
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<td>5</td>
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<td>3</td>
<td>5</td>
<td>4</td>
<td>8</td>
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<tr>
<td>3</td>
<td>8</td>
<td>2</td>
<td>9</td>
<td>1</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>6</td>
<td>4</td>
<td>6</td>
<td>10</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>10</td>
<td>7</td>
<td>12</td>
<td>5</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>8</td>
<td>5</td>
<td>8</td>
<td>7</td>
<td>11</td>
<td></td>
</tr>
</tbody>
</table>
The purpose of the game is to support the development of the addition strategy of keeping one number whole and taking leaps of ten.

Materials: 2 dice, 2 distinct markers ("frogs"), game board, leap cards

Directions: Children play the game in pairs and take turns rolling the dice. The roll of the cubes determines the number of steps to move.

For example, if Player 1 rolls a 3 and a 4, the frog marker jumps 7 spaces and Player 1 writes 7 in the corresponding box on the game board. Player 1 then turns over a card from the deck of Leapfrog cards. The card indicates how many leaps of ten to take. For example, if the card says “Leap 2 tens,” Player 1 jumps to 17 and writes 17 in the box, then jumps to 27 and records 27.

Now it is Player 2’s turn. Player 2 rolls the dice, takes a card, and marks his game board accordingly.

Player 1 then rolls again, takes a card, and marks her game board. For example, if she rolls a 4 and a 2 and the card says, “Leap 1 ten,” she moves the frog piece to 33 (ie, 27 +6) and then to 43, or from 27 to 37 and then 6 more to 43.

Play continues in this way until both frogs reach the end of their tracks.
Appendix G

Leapfrog game board

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MEASURING FOR THE ART SHOW
These cards and the gameboard can be made more durable by pasting them onto oaktag and laminating them.

<table>
<thead>
<tr>
<th>Leap 1 ten</th>
<th>Leap 2 tens</th>
<th>Leap 3 tens</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="frog1.png" alt="" /></td>
<td><img src="frog2.png" alt="" /></td>
<td><img src="frog3.png" alt="" /></td>
</tr>
<tr>
<td>Leap 1 ten</td>
<td>Leap 1 ten</td>
<td>Leap 2 tens</td>
</tr>
<tr>
<td><img src="frog1.png" alt="" /></td>
<td><img src="frog1.png" alt="" /></td>
<td><img src="frog2.png" alt="" /></td>
</tr>
<tr>
<td>Leap 1 ten</td>
<td>Leap 2 tens</td>
<td>Leap 2 tens</td>
</tr>
<tr>
<td><img src="frog1.png" alt="" /></td>
<td><img src="frog2.png" alt="" /></td>
<td><img src="frog2.png" alt="" /></td>
</tr>
</tbody>
</table>
SALUTE!

3 players
2\textsuperscript{nd}/3\textsuperscript{rd} GRADE

This game helps students understand the inverse relationship between addition and subtraction. It also helps them with basic fact recall.

Materials: a deck of cards—no jokers

Directions: Player 3 deals the entire deck of cards evenly and face down, to the two other players. Players 1 and 2 count, “1,2,3 Salute!” As they say, “Salute!” they bring the card from the top of their piles to their foreheads, number-side facing out, for the others to see. Important: Players 1 and 2 may not look at their own cards.

The two players look at one another’s foreheads as Player 3 adds or subtracts the numbers. Player 3 then says, “The sum is _____” or “The difference is ______.” (It’s important to use the vocabulary terms sum and difference.) Then the first two players try to be the first to guess their own number by adding or subtracting the other player’s number from the sum/difference reported by Player 3. The player who guesses his own number first takes the other player’s card and the process repeats. The winner is the one with the most cards at the end. That player then becomes Player 3.
CLOSE TO 20

2 or 3 players
2\textsuperscript{nd}/3\textsuperscript{rd} GRADE

This game helps children learn “compliments of ten”.

Materials: 4 Decks of Number Cards 0-10 with the wild cards removed; Student Sheet 6, Close to 20 Score Sheet; counters

Directions: The object of this game is to choose three cards that total as close to 20 as possible.

1. Deal five cards to each player.
2. Take turns. Use any three of your cards to make a total that is as close to 20 as possible.
3. Write these numbers and the total on the Close to 20 Score Sheet.
4. Find your score. The score for the round is the difference between the total and 20. For example, if you choose 8 + 7 + 3, your total is 18 and your score for the round is 2.
5. After you record your score, take that many counters.
6. Put the cards you used in a discard pile and deal three new cards to each player. If you run out of cards before the end of the game, shuffle the discard pile and use those cards again.
7. After five rounds, total your score and count your counters. These two numbers should be the same. The player with the LOWEST score and the fewest counters is the winner.
<table>
<thead>
<tr>
<th>Game</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Round 1: ____ + ____ + ____ = ____</td>
<td></td>
</tr>
<tr>
<td>Round 2: ____ + ____ + ____ = ____</td>
<td></td>
</tr>
<tr>
<td>Round 3: ____ + ____ + ____ = ____</td>
<td></td>
</tr>
<tr>
<td>Round 4: ____ + ____ + ____ = ____</td>
<td></td>
</tr>
<tr>
<td>Round 5: ____ + ____ + ____ = ____</td>
<td></td>
</tr>
<tr>
<td>TOTAL SCORE ____</td>
<td></td>
</tr>
</tbody>
</table>
THE JUMP, JUMP GAME

2 players
3rd GRADE

Materials: numbers cards 0-9, math notebook or lined paper, pencil, a partner

Directions: The objective of the game is to jump from 0 to a 2-digit number using only jumps of 1, 10, and 100 in the fewest jumps possible.
   1. Put deck face down between the two partners.
   2. Player one turns over two cards. These cards are used as digits. For example, if I turned over 5 & 2, player 1 uses these cards to make a two-digit number. Player one could make either 52 or 25.
   3. Choose the two-digit number that you and your partner will jump to.
   4. Draw a number line in your notebook. Write 0 to 52 or 0 to 25 to record what number you are jumping to.
   5. At the same time, both partners make jumps on the number line of 1, 10, or 100 to the number in the fewest possible jumps.
   6. Partners compare the number of jumps. If the amount of jumps is different, partners each share their strategy.
   7. Record the number of jumps in your notebook. This is your score.
   8. Player two turns over 2 cards and play begins again.
   9. At the end of the game, partners add up their total score. The partner with the LEAST score wins.
CLOSE TO 100

1-4 players
3rd GRADE

This game helps students with double-digit addition and subtraction.

Materials: digit cards-deck of 44, Close to 100 Recording Sheet for each player

Directions:
1. Deal out six Digit Cards to each player.
2. Use any four cards to make two numbers; for example, 6 and 5 could make either 56 or 65. Wild cards can be used as any numeral. Try to make numbers that, when added, give you a total that is close to 100.
3. Write these two numbers and their total on the Close to 100 Recording Sheet; for example, 42 + 56=98.
4. Find your score. Your score is the difference between your total and 100. For example, if your total is 98, your score is 2. If your total is 105, your score is 5.
5. Put the cards you used in a discard pile. Keep the two card you did not use for the next round.
6. For the next round, deal four new cards to each player. Make more numbers that come close to 100. When you run out of cards, shuffle the discard pile and use those cards again.
7. Five rounds make one game. Total your scores for the five rounds. The player with the LOWEST score wins!
## 10 to 100 Recording Sheet

<table>
<thead>
<tr>
<th>Round</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

**Total Score:**

---

**Score:**

```
Round 1:  +  +  =
Round 2:  +  +  =
Round 3:  +  +  =
Round 4:  +  +  =
Round 5:  +  +  =
Total Score:  
```
MULTIPLICATION DRAW

2 or 3 players
2\textsuperscript{nd}/3\textsuperscript{rd} GRADE

This is a fun way to practice multiplication facts.

Materials: 1 Multiplication Draw Record Sheet, Number Cards-four of each #s 1, 2, 3, 4, 5, & 10

Directions:
A player shuffles the cards and places the deck number-side down on the playing surface.

\textbf{Grade 2 Game:} Each player, on her section of the Record Sheet, records 2 as one of the factors for each draw in Round 1; 5 as one of the factors for each drawn in Round 2; and 10 as one of the factors for each draw in Round 3. The, at each turn, a player draws a card from the deck in order to generate a missing factor, records the number drawn on his or her part of the Record Sheet, and write the product. For example, if in Round 1 a player draws a 3, the player solves the fact 2x3 or 3x2.

\textbf{Grade 3 Game:} At each turn, a player draws two cards from the deck in order to generate two factors, and then records both of the factors and their produce on his part of the Record Sheet. For example, if in Round 1 a player draws a 3 and a 4, then that player records the fact 4x3=12 or 3x4=12.

After 5 turns, all players find the sums of their five products. The player with the highest sum wins the round.

\textbf{Grade 2 Variations:} Make one of the factors a number other than 2, 5 or 10.
Draw 2 cards at each turn in order to generate both factors.

\textbf{Grade 3 Variations:} Include sets of 4 cards for numbers other than 1, 2, 3, 4, 5 & 10.
## Multiplication Draw Record Sheet

<table>
<thead>
<tr>
<th>Round 1</th>
<th>Round 2</th>
<th>Round 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st draw: ( \times = )</td>
<td>( \times = )</td>
<td>( \times = )</td>
</tr>
<tr>
<td>2nd draw: ( \times = )</td>
<td>( \times = )</td>
<td>( \times = )</td>
</tr>
<tr>
<td>3rd draw: ( \times = )</td>
<td>( \times = )</td>
<td>( \times = )</td>
</tr>
<tr>
<td>4th draw: ( \times = )</td>
<td>( \times = )</td>
<td>( \times = )</td>
</tr>
<tr>
<td>5th draw: ( \times = )</td>
<td>( \times = )</td>
<td>( \times = )</td>
</tr>
</tbody>
</table>

**Sum of products:**

<table>
<thead>
<tr>
<th>Round 1</th>
<th>Round 2</th>
<th>Round 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st draw: ( \times = )</td>
<td>( \times = )</td>
<td>( \times = )</td>
</tr>
<tr>
<td>2nd draw: ( \times = )</td>
<td>( \times = )</td>
<td>( \times = )</td>
</tr>
<tr>
<td>3rd draw: ( \times = )</td>
<td>( \times = )</td>
<td>( \times = )</td>
</tr>
<tr>
<td>4th draw: ( \times = )</td>
<td>( \times = )</td>
<td>( \times = )</td>
</tr>
<tr>
<td>5th draw: ( \times = )</td>
<td>( \times = )</td>
<td>( \times = )</td>
</tr>
</tbody>
</table>

**Sum of products:**

<table>
<thead>
<tr>
<th>Round 1</th>
<th>Round 2</th>
<th>Round 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st draw: ( \times = )</td>
<td>( \times = )</td>
<td>( \times = )</td>
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<tr>
<td>2nd draw: ( \times = )</td>
<td>( \times = )</td>
<td>( \times = )</td>
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<tr>
<td>3rd draw: ( \times = )</td>
<td>( \times = )</td>
<td>( \times = )</td>
</tr>
<tr>
<td>4th draw: ( \times = )</td>
<td>( \times = )</td>
<td>( \times = )</td>
</tr>
<tr>
<td>5th draw: ( \times = )</td>
<td>( \times = )</td>
<td>( \times = )</td>
</tr>
</tbody>
</table>
SUGGESTED WEBSITES FOR MATH LEARNING

www.fLuu.nl/rekenweb/en/

http://illuminations.nctm.org

http://www.linkslearning.org/Home/Index.html

http://www.eduplace.com/kids/hmm/quiz/g_4.html

www.amathsdictionaryforkids.com

www.freerice.com

www.mathslice.com

www.multiplication.com

www.mathcats.com

www.funbrain.com  (math arcade)

www.coolmath4kids.com
Math Fact Practice from the 4th grade teachers!

Directions: Choose any activity, or more than one activity, to help practice your multiplication facts. Practice your facts for at least 15 minutes. If you know any other games or websites, please let us know!

1. **Flash Cards:** If you don't have flash cards, you can make them! Cut up pieces of paper and put the math problem on the front and the answer on the back. Quiz yourself, or have someone hold up the cards for you to get the answer.

2. **Math War:** Use a deck of cards to play war. Instead of which card is larger, whoever multiplies the two cards correctly and the fastest, wins the two cards. Whoever gets the entire deck, wins! (You can use this to help with addition and subtraction, too)

3. **4 in a row:** Have your child bring home a copy of the game card. The directions are on the back. We have played it in the classroom, so they are familiar with how to play.

4. **Quiz out loud:** Quiz your child by yelling out math facts for them to answer. You can do this in the car, while your making dinner, or anywhere! You can print out multiplication tests for your child at [www.multiplicationtest.com](http://www.multiplicationtest.com)

5. **Winning Touch:** (you can borrow the game board and tiles from me) Place all tiles face down. Each player chooses two tiles to start. Player one places one of his tiles on the board to correspond to the number's factors. Then draw another tile. Player two can only place their tile on one of the four sides of player one's tile. If he can not, he misses his turn and draws another tile. Play continues until the first person places all of his tiles on the board first.

6. **Salute:** With a deck of cards, 2 players each take a card and place it face up on their forehead without looking at it. The third person gives the multiplication answer. Each player with the card on their forehead has to guess their number by looking at the other card and hearing the answer yelled out loud. The winner takes both cards. The winner has all the cards.