Batting For Facts

Skill: Subitizing, number recognition, multiplication facts

Materials: Two dice, Batting For Facts game board, Batting For Facts Hitting Sheet, at least four markers per team.

Players: 2 players or 2 teams

How To Play: To be the player/team who scores the most points after three innings wins the game!

Directions:

• Teams/Players rotate “pitcher” and “batter”. If the game is played with more than one person on a team—each member of the pitching team “pitches” and each member of the batting team “bats” (up to three outs in an inning)
• Player 1/Team 1 begins with marker on Home Plate.
• Player 2/Team 2 “pitches” or rolls the dice it is now the “batter’s” turn to multiply the two numbers on the dice and call out the product of the two dice.
• Player 1/Team 1 then checks solution on calculator, facts sheet, or just knows the product.
• If the answer is correct Player 2/Team 2 finds the product on the “Hitting Table” and moves all the markers on the field that many spaces.
• If the product is an “out” no runner advances.
• Each time a counter moves past home plate, a run is scored for that team. Each run is “tallied” on the score sheet. After three outs the Players/Team switch rolls.
• Player receives a “strike” for each incorrect answer (an incorrect answer can also be logged as an out). Three strikers is equal to one out.
• Teams now calculate their final scores by adding the sums of their three innings.
• The team with the greatest total wins the game.

Variations:

• Use number cards 1-10 to practice larger products
• Use four dice (add the sum of two pairs of dice), create two sums and multiply
  • Two dice (10s and 1s)
  • Use 12 sided dice to practice facts 1-12
Batting For Facts

HITTING TABLE (for 2 six-sided dice)

<table>
<thead>
<tr>
<th>36 = Home run (score a run)</th>
<th>6 to 15 = Single (1 base)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 to 35 = Triple (3 bases)</td>
<td>5 or less = Out (record as an out)</td>
</tr>
<tr>
<td>16 to 24 = Double (2 bases)</td>
<td>Incorrect answer = Strike</td>
</tr>
</tbody>
</table>

HITTING TABLE 1 to 10 facts (using number cards)

<table>
<thead>
<tr>
<th>90 to 100 = Home run (score a run)</th>
<th>25 to 45 = Single (1 base)</th>
</tr>
</thead>
<tbody>
<tr>
<td>72 to 81 = Triple (3 bases)</td>
<td>21 or less = Out (record as an out)</td>
</tr>
<tr>
<td>48 to 70 = Double (2 bases)</td>
<td>Incorrect answer = Strike</td>
</tr>
</tbody>
</table>

HITTING TABLE 1 to 12 facts (using number cards or 12 sided dice)

<table>
<thead>
<tr>
<th>80 to 144 = Home run (score a run)</th>
<th>25 to 49 = Single (1 base)</th>
</tr>
</thead>
<tbody>
<tr>
<td>66 to 77 = Triple (3 bases)</td>
<td>24 or less = Out (record as an out)</td>
</tr>
<tr>
<td>50 to 64 = Double (2 bases)</td>
<td>Incorrect answer = Strike</td>
</tr>
</tbody>
</table>

SCOREBOARD

<table>
<thead>
<tr>
<th>POINT TOTALS</th>
<th>1ST inning</th>
<th>2ND inning</th>
<th>3rd inning</th>
<th>FINAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team 1</td>
<td>_________</td>
<td>_________</td>
<td>_________</td>
<td>______</td>
</tr>
<tr>
<td>Team 2</td>
<td>_________</td>
<td>_________</td>
<td>_________</td>
<td>______</td>
</tr>
</tbody>
</table>

1] Which team won the first inning? ________________________________

By how much? ________________ runs

2] Which team won the second inning? ______________________________

By how much? ________________ runs

3] Which team won the third inning? ________________________________

By how much? ________________ runs

Which team won the game? ________________________________ By how much? ________________ runs
Build That Number

Skill: Creating a numbers using expressions.

Materials: Number Cards 0-10 (Kindergarten 0-10; 1-2 grades 0-20).

- Can use lower number cards.
- Can use a regular deck of cards just remove face cards or designate numbers for face cards (e.g. J=0, Q=11, K=12).

Players: 2-4

How To Play: To collect the most cards

Directions:

- Shuffle the cards and places five cards number side up on the table. This is “The Bank”. The rest of the cards are placed in a pile face down (number side down).
- Next Player 1 turns over the top card from the “face down” pile. This card is now that player’s “Target Number”.
- Player 1 now must “build” or “create” the “Target Number”, by adding or subtracting use 2 or more of the five cards from in “The Bank”. Any card in “The Bank” may only be used once per turn.
- If Player 1 can use 2 or more cards from “The Bank” to build the “Target Number”, Player 1 may keep those cards and Player 1’s turn is over and then s/he replaces all of the cards used from “The Bank” from the top of the “face down” deck.
- If Player 1 cannot build the “Target Number” the turn is over. The “Target Number” is placed at the bottom of the “face down” pile and a new “Target Number” is selected from the top of the “face down” pile. This is the new “Target Number”.
- Play continues until all cards are used.
- Player with the greater number of cards wins.

Variations:

Students may use all four operations—addition, subtraction, multiplication, and division. Students may also create fractions to build number.

Students may wish to record their number sentences to keep track of their thinking and solutions.

Game may also be played with 6 dice. The die for the “Target Number” should be a different color than the other 5 dice. For younger students you may use 6 sided die, for older students or those who need more challenges 9 or 10 sided die (or larger).

Diana Zaragoza 2013
Capture The Factor!

OBJECT: To have the greatest total score

Skill: Develop understanding of factors; Prime numbers

MATERIALS:
- Capture the Factor Game Mat
- Counters/Markers
- Calculator (optional)
- Paper and pencil to keep score

Directions:
1] Players decide who will be Player 1 and who will be Player 2

2] Player 1 selects a number to begin Round 1. This must be a 2 digit number from the number grid/gameboard. Player 1 covers that number and records this as his/her points for round 1.

3] Player 2 must now cover all of the FACTORS for the 2 digit number. Factors may only be covered for that number (product) during that turn. The sum total of all the factors is the score for Player 2 in round 1.

A FACTOR MAY ONLY BE COVERED ONCE DURING A ROUND

4] If Player 2 fails to select/cover all the factors for the number selected by Player 1, at the end of Player 2’s turn Player 1 may “steal” the remaining factors and add those points to his/her score.

5] During round 2 the players switch roles—Player 2 selects a number to cover and adds that number to his/her score. Player 1 must now locate and cover all the factors for that number.

6] Once a number is covered it is no longer in play and cannot be used again.

7] The first player in a round must always cover a 2 digit number unless there are only single digit numbers left.

8] Play continues with players switching roles until there are no more spaces to cover. Player with the highest total score in the winner!

Diana Zaragoza October 2012
Capture The Factor!

Level Two Game

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
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<td>52</td>
<td>54</td>
<td>55</td>
<td>56</td>
<td>60</td>
</tr>
</tbody>
</table>
# Capture The Factor!

## Level One Game

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
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<tbody>
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<td>24</td>
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<td>26</td>
<td>27</td>
<td>28</td>
<td>30</td>
<td>32</td>
<td></td>
</tr>
</tbody>
</table>
**CLAP!**

**Skill:** Recognizing and finding multiples of a number

**Materials:** Number cards 3-9 (however early on you may wish to allow students to use a multiplication chart)

**Players:** 5-10: Can be played whole class

**How To Play:** To correctly say the next counting number or clap if the number is a multiple of the target number.

**Directions:**

- Players sit at their seats or other common location.
- One player selects the top card from the pile of numbers cards which are face down.
  - This number is the CLAP number.
  - The player to his/her right calls out the STOP number. This number should be at least 30, but probably not over 150.
  - The next player to the right begins the game by counting “one”.
  - Play continues clockwise as each player in turn calls out the next counting number or clapping.
  - A player must CLAP instead of saying the next counting number if the next number is a multiple of the “CLAP” number.
- Should a player make an error, the next player starts over with the number one
- The player to use all their cards wins the game.
- Play continues until the STOP number is reached.
- Player may begin again by selecting a new CLAP number and starting the game over.

**Example:** CLAP number 7

1, 2, 3, 4, 5, 6, CLAP, 8, 9, 10, 11, 12, 13, CLAP . . .

**Variation:**

- Players select two numbers one CLAP number, one SNAP number. Players CLAP for CLAP number, SNAP for SNAP number and both CLAP and SNAP when number is a multiple of both.

**Example:** CLAP number 7 SNAP number 3

1, 2, SNAP, 4, 5, SNAP, CLAP, 8, SNAP, 10, 11, SNAP, 13, CLAP, SNAP, 16, 17, SNAP, 19, 20, CLAP/SNAP, 22, 23 . . .

Diana Zaragoza October 2013
Division RULES!

**Skill:** Using rules of divisibility; Recognizing multiples

**Materials:** Number cards 0-9 (or regular deck of cards removing K, Q, and 10—jacks are zeros). Second set of cards (2 of each—2, 3, 4, 5, 6, 9, and 10. You may use all numbers 2-10 if desired.

**Players:** 2 players or 2 teams

**How To Play:** To be the first player to use all of his/her cards.

**Directions:**

- Full deck of cards are the “dividend” cards. The smaller deck of cards are the “divisor” cards. Players shuffle both sets of cards and one player deals eight (8) “dividend” cards to each player and places the rest of the deck face down on the table next to the “divisor” cards which are also face down.
- At the beginning of each round one player turns over one “divisor” card.
- Players now take turns creating 2-digit numbers that are multiples of the “divisor” card. Players are able to make as many combinations as they can, but each card can only be used once.
- Cards that are used are placed in a discard pile. For challenges, players may use “Rules of Divisibility” to check. Any numbers that are not multiples of the “divisor” must be returned to the players pile.
- If a player CANNOT make a 2-digit number that is a multiple of the “divisor” card, he/she must add a card to his/her hand from the draw pile. Turn is over.
- If the draw pile of “divisor” pile get used, they can be shuffled and used again.
- The player to use all their cards wins the game.

**Example:**

<table>
<thead>
<tr>
<th>3</th>
<th>4</th>
<th>7</th>
<th>2</th>
<th>8</th>
<th>2</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>4</td>
<td>3</td>
<td>6</td>
<td>7</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The numbers built are: 36, 24, 72

Diana Zaragoza October 2013
Domino Lotto—Multiplication

**Skill:** Use subitizing or counting skills, identifying equivalent values or names for numbers, factors and product.

**Materials:**
- Dominos (Third double 6; 4-6 grades double 9 or double 12).
- Number cards with products 2-36 (3rd grade) 2-81 or 2-144 (5-6).
- Can use dominos with greater totals—double 12 or double 15.

**Players:** 2-4

**How To Play:** To collect the most dominos

**Advanced Preparation:** Choose 12 dominoes, each with a different fact you wish to have your students practice. Select the numbers cards that match those products. This is done for each group to play.

**Directions:**
- Players place the 12 dominos face down in two equal columns.
- Next players place the 12 cards face down into two columns of six.
- Each player takes one tile from the pile and turns it over (face up) and reads the factor for each side aloud and then multiplies the to two sides and states the product.
- Next, player selects a card from the card columns. If the card matches the sum (total number of “pips” on the domino, the player gets to keep the card and the domino and take another turn.
- If the number on the card does not match the product of the “pips” the player must turn back both the card and the domino back over face down (in the same location) and the players turn is over.
- Players try to remember which cards match with which dominos they have viewed.
- Play continues until all tiles and cards are used.
- Players receive one point for each pair. Player with the most points wins.

**Variations:**
- Use dominos with greater products.
- Have students record number sentences to receive points.
- Have students add “pips” on the domino to practice addition or subtraction number with less value for that with greater value and practice subtraction.
- Have students use place value to recognize numbers (one side of domino denotes 10s the other 1s).

Diana Zaragoza 2013
Double Digit Difference

Skill: Creating a 2 digit number, subtracting 2-digit numbers mentally or on a number grid.

Materials: number cards 0-9, number grid, one markers per player

Players: 2

How To Play: Be the first player to have the lowest sum.

Directions:

- One player shuffles the cards and places them face down on the table.
- Player 1 selects two cards from the top of the deck—Player 2 does the same.
- Next each player creates a 2-digit number using the cards drawn and places his/her marker on the number grid to mark his/her number.
- Player 1 finds the difference between the two numbers marked. The difference is Player 1’s score for that round.
- Player 1 records both numbers and the difference.
- Both players repeat the above steps, except this time Player 2 finds the difference between the two numbers marked and that difference is Player 2’s score.
- Play continues for 5 rounds with each player recording his/her score.
- At the end of 5 rounds both players total their scores. The sum is that player point total. Players may use a calculator if appropriate.
- Player with the lowest sum wins.

Variations:

- Players use 2 dice and add to create 2-digit numbers
- Players can find the difference and player with the greatest total wins.

Diane Zaragoza 2013
<table>
<thead>
<tr>
<th>Round</th>
<th>My Number</th>
<th>My Partner’s Number</th>
<th>Difference (Score)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
DUELING DIGITS

Skill: Read and comparing numbers

Materials: Number cards 0-9 Can use regular deck of playing cards.

Players: 2-4

How To Play: To collect more cards than your opponent

Directions:

- Shuffle the cards and place them on the table number side down.
- Player takes 2 cards and uses them to create the largest two digit number possible.
- Players compare numbers. The Player with the greater number gets to take all four cards. If both players turn over the same number this is a “tie”. A tie is broken by having each player turn over another card and comparing values. The player with the greater number wins all the cards.
- Play continues until all cards are used.
- Player with the greater number of cards wins (Players can continue game until, by reshuffling cards in “their hand” and beginning again).

Variations: 6

Dueling Digits with three cards

- Players shuffle cards and place number side down
- Each player takes three cards from the pile and uses them to create the largest 3-digit number possible.
- Players compare values. Player with the greatest number wins all the cards
- Play continues until all cards are used.
- Player with the greater number of cards winsSame game as above but students can use 4 or more cards to make greater numbers

Place Value

Students use place value charts of grids as they draw or create their numbers.

Use dominoes instead of two cards and have students compare number values.

Diana Zaragoza 2013
MULTIPLICATION TARGET PRACTICE

Skill: Practice estimating products of 2 and 3 digit numbers

Materials: Number cards 0-9, one die, optional calculator

Players: 2

How To Play: To be the player to score the most points

Directions:
- Players shuffle cards and place all of them number side down.
- Players will take turns, alternating back and forth. When it is a player’s turn the player should do the following:
  - **ROUND 1:**
    - Roll the die. Look up the target range of the product in the table provided.
    - Select the top 4 cards from the pile and turn them over face side up.
    - Player must now create two 2 digit numbers (cards may be placed using either cards as the tens digit or the ones digit) that will produce a product which falls within the range indicated by the roll of the die.
    - Player now finds the exact product either by using a calculator or paper pencil algorithm. Player must determine if the product actually falls within the range of the target number.
    - If the product is within the range—the player scores 1 point.
    - If the product is not within the range—the player scores 0 points.
    - Sometimes it will be impossible to create two 2 digit numbers that will create a product within the range—on those occasions the player scores 0 points.
  - **Turns 2-5 for each player:** Repeat the process above taking 4 cards from the draw pile and creating two 2 digit numbers and finding the product.
- **SCORING:** The player with the most points at the end of 5 rounds wins!

<table>
<thead>
<tr>
<th>Number on Die</th>
<th>Target Range of Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>500 or less</td>
</tr>
<tr>
<td>2</td>
<td>501-1,000</td>
</tr>
<tr>
<td>3</td>
<td>1,001-3,000</td>
</tr>
<tr>
<td>4</td>
<td>3,001-5,000</td>
</tr>
<tr>
<td>5</td>
<td>5,001-7,000</td>
</tr>
<tr>
<td>6</td>
<td>More than 7,000</td>
</tr>
</tbody>
</table>

Diana Zaragoza October 2013
MULTIPLICATION WRESTLING

Skill: Developing partial-products or area model multiplication algorithm

Materials: Number cards 0-9 Wrestling worksheet

Players: 2

How To Play: To be on the wrestling team with the greatest product of two 2-digit factors.

Directions:

- Players shuffle cards and place all of them number side down.
- Each player draws four (4) cards for the draw pile. The players then decide what 2-digit number they will create. HINT: players should create two 2 digit numbers that will produce the greatest product.
- Players have now created their two “Wrestling Teams”.
- Players record their two 2-digit numbers in expanded notation (as a sum of 10s and 1s).
- Players now have teams “wrestle” each other. See example below.
- SCORING: The player with the largest product wins the round
  - To play multiple rounds player can win individual rounds and/or players can win overall game by having the “high score”.
- To begin a new round, each player must draw four (4) new cards and play start over.

Example:

<table>
<thead>
<tr>
<th>Cards Drawn</th>
<th>TEAMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 7 3 5</td>
<td>73 54</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TEAM 1</th>
<th>TEAM 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>70 + 3</td>
<td>50 + 4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>70 + 3</th>
<th>50 + 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,500 + 150</td>
<td>280 + 12</td>
</tr>
</tbody>
</table>

= 3,942 Total Score

Diana Zaragoza 2013
MULTIPLICATION WRESTLING

ROUND 1  Cards: __________  __________  __________  __________  __________

Numbers formed: __________  ★  __________

Teams: (__________ + __________)  ★  (__________ + __________)

Sums: __________________  _______________

Total (add the sums) __________________

ROUND 2  Cards: __________  __________  __________  __________  __________  __________

Numbers formed: __________  ★  __________

Teams: (__________ + __________)  ★  (__________ + __________)

Sums: __________________  _______________

Total (add the sums) __________________

Diana Zaragoza 2013
My Fraction Of

Skill: Finding a fraction of a set/group; multiplying fractions and whole numbers.

Materials: Fraction cards, Counter Cards

Players: 2 players

How To Play: To be the player to score the most points.

Directions:

- Players shuffle each deck separately (counter deck and fraction deck). Place both decks on table face down.
- Players take turns back and forth selecting one card from each deck. The player used the cards to create a “fraction of” the set. When the player finds the solution that is the number points the player receives for that round.
  - Each counter card contains three choices for the player to choose from
  - Player must select the “group” which allows the player to create exactly equal sets without any left over. The solution MUST be a whole number (no fractions, no remainders).
  - Students must use the denominator from each fraction to create the groups. Players may not use equivalent fractions.

EXAMPLE: Player 1 draws \[ \frac{1}{3} \] and

- 14 counters will create equal sets, but with a remainder
- 28 counters will create equal sets, but with a remainder
- 15 counters will create 3 equal groups with 5 counters in each group, therefore Player 1 will score 5 points.

VARIATION: Allow students to use equivalent fractions when it helps them gain more points.

Diana Zaragoza October 2013
<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>0/2</td>
<td>1/2</td>
<td>1/5</td>
<td>1/10</td>
</tr>
<tr>
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<td>1/10</td>
<td>5/10</td>
<td>10/10</td>
</tr>
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Diana Zaragoza October 2013
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Diana Zaragoza October 2013
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</tbody>
</table>
**Number Wizard**

**OBJECT:** Be the first player to get for chips in a row horizontally, vertically or diagonally.

**MATERIALS:**
- Four In A Row Game Mat
- Three dice
- Markers to cover numbers (about 25)

**SET UP:**
1] Players may choose to have a paper and pencil close by to record their equations as they play.
2] Players choose their colors for the game.

**TO PLAY:**
1] Roll a die to determine the Starting Player.

2] The Starting Player rolls the three 6 sided Scoring Dice and places them in the Scoring Dice Area.

3] He or she uses the three Scoring Dice in an equation that will yield an answer equal to one of the numbers on the game sheet. This number is then covered with his or her colored marker.

4] The next player now has a turn. He or she must change one, and only one, Scoring Die to a new number. This player now takes a turn at using these numbers to hit and cover a different number on the sheet with his or her marker.

5] Play continues until one player has successfully placed four of his or her markers in an unbroken straight line. This player is the winner!
# Number Wizard

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**Level Two Game**

**Scoring Dice**

Diana Zaragoza October 2012
## Number Wizard

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<td>9</td>
<td>1</td>
<td>16</td>
<td>4</td>
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</tbody>
</table>

### Level One Game

**Scoring Dice**

Diana Zaragoza October 2012
ON TARGET WITH DICE

OBJECT: Cover all twelve Targets on the game sheet in as few turns as possible.

MATERIALS:
- Target game mat
- Three dice
- Markers to cover numbers

SET UP:
1] Players may choose to have a paper and pencil close by to record their equations as they play.
2] A single chip/marker should be placed at “5” on the Turn Marker at the bottom of the game sheet.
3] The other chips/markers can be left off to the side for use during play.
4] Roll the three 6 sided Scoring Dice and place them in the area marked Scoring Dice at the bottom of the sheet.

TO PLAY:
1] Players use the three Scoring Dice to create equations that equal the Target Numbers (1 through 12 on the Beginner Sheet) shown on the sheet. Players can add, subtract, multiply, or divide the numbers to “hit the target” numbers. Each time a Target is hit it can be covered with a chip. Players should think of as many equations as they can to hit the different Targets on the board. The more Targets hit in one turn the better!

2] When players cannot hit any more Targets using the Scoring Dice, one (and only one) die can be changed to ANY other number.

3] The Turn Marker is now moved to the right one space to “4”.

4] Now that one of the Scoring Dice has changed, players try making new equations to hit and cover additional Targets.

5] Play continues in the manner until all 12 Target have been covered.

6] If all 12 Targets are covered in five turns or less, it’s a win! The final score is equal to the number that the Turn Marker covers at the end of the game. The higher the score the better!

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ON TARGET WITH DICE

Level One Game

Scoring Dice

Place Holder

Diana Zaragoza October 2012
ON TARGET WITH DICE

Level Two Game

Scoring Dice

Place Holder

Turn marker

1 2 3 4 5

Diana Zaragoza October 2012
**SUBTRACTION BULL’S EYE**

**Skill:** Practice subtraction with 2 and 3 digit numbers

**Materials:** Number cards 0-9, optional calculator

**Players:** 2 or more (game can be played individually)

**How To Play:** To be the player to get as close to 0 without going below (negative numbers).

**Directions:**

- Players shuffle cards and place all of them number side down.
- Players will take turns, alternating back and forth. Each player will have 5 turns during the game. When it is a player’s turn the player should do the following:
  - **ROUND 1:** select the top 2 cards from the pile and turn them over face side up. Player must now make a 2 digit number (cards may be placed using either cards as the tens digit or the ones digit). Player now much subtract that 2 digit number from the beginning score of 250 points. This can be done on scratch paper or white boards. Others players may check Player 1 work on a calculator at this point.
  - **Turns 2-5 for each player:** Repeat the process above taking 2 cards from the draw pile and creating a 2 digit number to be subtracted from the players result obtained from the previous round.
- Player with the score closest to 0 without going below 0 wins the game!

**Example:**

**Round 1:** Draw 3 and 7. Subtract 73 or 37  
250 – 37 = 213

**Round 2:** Draw 6 and 4. Subtract 46 or 64  
213 - 46 = 167

**Round 3:** Draw 2 and 9. Subtract 29 or 92  
167 – 29 = 138

**Round 4:** Draw 0 and 5. Subtract 5 or 50.  
138 – 50 = 83

**Round 5:** Draw 8 and 1. Subtract 18 or 81.  
83 – 81 = 2

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