

July

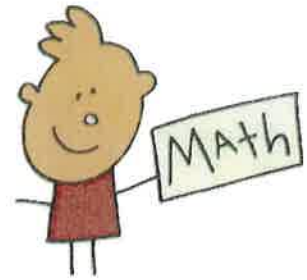
<p>Week 1</p>	<p>Practice your (x) fact cards with someone. Make "Facts I Know" and "Facts I Still Need to Work On" piles. Which facts do you still need to work on? Write these in your journal. What strategies can help you figure these out?</p>	<p>How many different ways can you make \$3.25? List at least 10 combinations.</p>	<p>Practice your (+) fact cards with someone. Make "Facts I Know" and "Facts I Still Need to Work On" piles. Which facts do you still need to work on? Write these in your journal. What strategies can help you figure these out?</p>	<p>Play "Close to 1000". Directions and cards attached. Record your combinations and sums in your journal. (Follow the recording page format.)</p>	<p>Solve $474 + 389$. How many different strategies can you use to find the sum? Write your strategies in your journal.</p>
<p>Week 2</p>	<p>Play "Multiplication War". It's just like regular war, except that you flip two cards over, and the greatest product wins!</p>	<p>Practice your unknown facts from last week. What strategies or "start with" can you use to help you find the answer?</p>	<p>Read a math book. Draw a picture AND write a retell of your favorite part. Be sure your picture and retell includes math!</p>	<p>Susie has 7 dogs. Jack has 6 times as many as Susie. Sarah has half as many as Jack. How many dogs does Jack have? Sarah? How did you figure it out?</p>	<p>At what time will the sun set this evening? What time was it 2 hours and 45 minutes earlier?</p>
<p>Week 3</p>	<p>Practice your unknown facts from two weeks ago. What strategies or "start with" can you use to help you find the answer?</p>	<p>Play "Capture 300 to 600". Directions and cards attached. Record all of your combinations and sums in your journal. (Follow the recording page format.)</p>	<p>If 1000 is the answer, what could the question possibly be? Think of at least 5 combinations where the answer is 1000.</p>	<p>There are 24 hours in a day and 60 minutes in an hour. How many minutes are in a day? Show your thinking in your journal.</p>	<p>Starting today, create a bar graph showing the high temperatures for the next week. Be sure to label all parts of your graph correctly!</p>
<p>Week 4</p>	<p>Family fun! Go on a road trip. Write down the miles on the odometer when you leave. Write down the miles when you get home. How many miles did you travel?</p>	<p>Practice ALL your (x) fact cards with someone. Make "Facts I Know" and "Facts I Still Need to Work On" piles. Which facts do you still need to work on? Write these in your journal. What strategies can help you figure these out?</p>	<p>Using a take-out menu, plan lunch for your family. How much will the total cost be? (Don't worry about tax or tip!) List your menu and strategies in your journal.</p>	<p>Practice ALL your (+) fact cards with someone. Make "Facts I Know" and "Facts I Still Need to Work On" piles. Which facts do you still need to work on? Write these in your journal. What strategies can help you figure these out?</p>	<p>Practice ALL your (+) fact cards with someone. Make "Facts I Know" and "Facts I Still Need to Work On" piles. Which facts do you still need to work on? Write these in your journal. What strategies can help you figure these out?</p>

August

<p>Week 1</p>	<p>Solve 1000 – 754. How many different strategies can you use to find the difference? Record your work in your journal.</p>	<p>Practice your unknown facts from last week. What strategies or “start with” can you use to help you find the answer?</p>	<p>Read a math book. Draw a picture AND write a retell of your favorite part. Be sure your picture and retell includes math!</p>	<p>Play “Capture 300 to 600”. Directions and cards attached. Record all of your combinations and sums in your journal. (Follow the recording page format.)</p>	<p>Play “Factorize” on Illuminations. Remember to play with an adult! http://illuminations.nctm.org/ActivityDetail.aspx?ID=64 What numbers did you find all of the factors for? Were there any numbers that you could not?</p>
<p>Week 2</p>	<p>Play “Close to 1000”. Directions and cards attached. Record your combinations and sums in your journal. (Follow the recording page format.)</p>	<p>Practice your unknown facts from two weeks ago. What strategies or “start with” can you use to help you find the answer?</p>	<p>Jack went shopping. He spent \$3.50 on an ice cream. When he got back home, he had \$7.75 left in his pocket. How much money did he have before shopping?</p>	<p>Choose one activity for a day and record the start and stop time. Calculate the elapsed time for the activity. (ex. time you wake up and go to sleep)</p>	<p>Play “Number Invaders”. http://www.mathplayground.com/balloon_invaders.html What combinations do you still need to work on?</p>
<p>Week 3</p>	<p>Roll 2 dice and multiply to find the product. Record the product. Do this 25 times. Create a bar graph with the results. What do you notice?</p>	<p>Play “Capture 300 to 600”. Directions and cards attached. Record all of your combinations and sums in your journal. (Follow the recording page format.)</p>	<p>Read a math book. Draw a picture AND write a retell of your favorite part. Be sure your picture and retell includes math!</p>	<p>Use a grocery store flyer to plan a breakfast for your family. List all the items that you need and record the price of each item. How much will your breakfast cost?</p>	<p>Play Lemonade Stand http://www.coolmath-games.com/lemonade/index.html</p>
<p>Week 4</p>	<p>Gather 3 store receipts. Find the total amount that was spent. Check your answer against a calculator. Was your amount accurate? If not, can you find your mistake?</p>	<p>A farmer has chickens and cows. What combination of animals could total 24 legs? Is there more than one combination?</p>	<p>Have a scavenger hunt for real-world examples of right angles (ex. the corner of a book).</p>	<p>Figure out your age in months.</p>	<p>Play “Change Maker” http://www.funbrain.com/cashreg/index.html What were some of your favorite change combinations?</p>



Grade 3 Summer Math Resources



Math Books to Read:

Math Curse by Jon Scieska and Lane Smith
A Remainder of One by Elinor Pinczes
Sir Cumference Series by Cindy Neuschwander and Wayne Geehan
A Million Fish, More or Less by Patricia McKissack
How Much is a Million? By David Schwartz
If You Made a Million by David Schwartz
The Grapes of Math by Greg Tang
Math for All Seasons by Greg Tang
The Best of Times by Greg Tang

Fun Websites to Explore:

BBC Bitesize Math
Fun Brain Math Arcade
Mr. Nussbaum's Math Lab
Cool Math
Illuminations (click on 3-5 activities)
Bedtime Math

IPad/Android Apps:

Dreambox
Match 10
Set
Number Hero: Multiplication
Numbers League
Gozoa: The Key Quest
Fruity Fractions
Mystery Math Museum

Other Great Games:

Monopoly
Yatzee
Farkle
Equate
Shut the Box

Capture 300 to 600

You need

- 301-600 chart, taped together
- Plus/Minus Cards
- 30 chips, buttons, etc.
- game piece for each player
- your math journal
- Capture from 300 to 600 sample recording sheet

Play in pairs or in 2 teams.

1. Place 30 chips on the 301-600 chart so that each chip is on a different number.
2. Put your game piece anywhere on the 301-600 chart.
3. Deal five Plus/Minus Cards to each player or team, and place the remaining cards face down on the table.
4. Players or teams take turns trying to capture a chip. On your turn, move your game piece using any combination of your Plus/Minus Cards to land on a square with a chip. You can use any number of cards, from 1 to all 5!
5. If you land exactly on a square with a chip, capture it by taking it off the board. You can capture only one chip during a turn, and it must be from the square you land on.
6. Record your moves in an equation following the Capture from 300-600 Recording Sheet. For example, if you begin on 445 and use the cards +2, +10, -100, and +3, you record $445 + 2 + 10 - 100 + 3 = 320$.
7. Find out how many spaces you moved all together, and record that too. In the example above, you moved forward 15 spaces (+2, +10, +3) and

backward 100 spaces (-100), so altogether you moved 85 spaces from 45.

8. Place the Plus/Minus Cards that you used face down in a discard pile. Take cards from the top of the deck to replace them. If all the Plus/Minus Cards is used up, shuffle the discard pile and turn it face down on the table.
9. The first player or team to capture five chips wins!

Capture from 300 to 600 Recording Sheet

As an equation, record your starting number, the Plus and Minus Cards you used, and your ending number for each move. Then, find how many spaces you moved in all.

	Equation	How many spaces?
	Example: $316 + 50 + 10 - 3 = 373$	57
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

More ways to play:

Play to capture 10 chips or all the chips! Whatever you would like!

301-600 Chart (page 1 of 3)

301	302	303	304	305	306	307	308	309	310
311	312	313	314	315	316	317	318	319	320
321	322	323	324	325	326	327	328	329	330
331	332	333	334	335	336	337	338	339	340
341	342	343	344	345	346	347	348	349	350
351	352	353	354	355	356	357	358	359	360
361	362	363	364	365	366	367	368	369	370
371	372	373	374	375	376	377	378	379	380
381	382	383	384	385	386	387	388	389	390
391	392	393	394	395	396	397	398	399	400

301–600 Chart (page 2 of 3)

401	402	403	404	405	406	407	408	409	410
411	412	413	414	415	416	417	418	419	420
421	422	423	424	425	426	427	428	429	430
431	432	433	434	435	436	437	438	439	440
441	442	443	444	445	446	447	448	449	450
451	452	453	454	455	456	457	458	459	460
461	462	463	464	465	466	467	468	469	470
471	472	473	474	475	476	477	478	479	480
481	482	483	484	485	486	487	488	489	490
491	492	493	494	495	496	497	498	499	500

301-600 Chart (page 3 of 3)

501	502	503	504	505	506	507	508	509	510
511	512	513	514	515	516	517	518	519	520
521	522	523	524	525	526	527	528	529	530
531	532	533	534	535	536	537	538	539	540
541	542	543	544	545	546	547	548	549	550
551	552	553	554	555	556	557	558	559	560
561	562	563	564	565	566	567	568	569	570
571	572	573	574	575	576	577	578	579	580
581	582	583	584	585	586	587	588	589	590
591	592	593	594	595	596	597	598	599	600

Plus/Minus Cards (page 2 of 2)



$+10$

$+10$

-10

-10

$+20$

$+20$

-20

-20

$+30$

$+30$

-30

-30

$+40$

-40

$+50$

-50

$+100$

-100

$+200$

-200

Plus/Minus Cards (page 1 of 2)



$+1$

$+1$

$+1$

$+1$

-1

-1

-1

-1

$+2$

$+2$

-2

-2

$+3$

$+3$

-3

-3

$+4$

-4

$+5$

-5

Close to 1,000

You need

- Deck of Digit Cards
- Math journal
- Recording Sheet example(attached)

Play with a partner.

1. Deal 8 cards to each player.
2. Take turns. On each turn:
 - Choose 6 cards that make a total as close to 1,000 as possible. For example, 2, 6 and 5 could make 652, 625, 526, 562, 256, or 265. Wild cards can be used as any digit. Try to make numbers that, when added MENTALLY, give you a total that is close to 1,000.
 - Write these numbers and their total following the Close to 1,000 Recording Sheet; for example, $365 + 633 = 998$
 - Find your score. Your score is the difference between your total and 1,000. For example, if your total is 998, your score is 2.
 - Put the cards you used in a discard pile. Keep the two cards you did not use for the next round.
 - For the next round, deal out 6 cards to each player.
3. If you run out of cards, mix up the discard pile and use them again.
4. After 5 rounds, add your scores to find your final score. The player with the LOWEST score wins.

More Ways to Play

- **CHALLENGE!** Write the score with + or - signs to show whether your total is less than or greater than 1000. For example, if your score is 999, your score is -1. If your total is 1,005, your score is +5. The total of these two scores is +4. Your goal is to get to a final score for five rounds that is as close to 0 as possible.
- Play Close to 0. Use the same number of cards (6) but find the difference. Your score is the difference between 0 and your answer.

Sample Recording Sheet

Close to 1,000 Recording Sheet

Game 1	Score
Round 1: _____ + _____ = _____	_____
Round 2: _____ + _____ = _____	_____
Round 3: _____ + _____ = _____	_____
Round 4: _____ + _____ = _____	_____
Round 5: _____ + _____ = _____	_____
	Final Score _____

Digit Cards (page 1 of 3)



0

0

1

1

0

0

1

1

2

2

3

3

2

2

3

3

Digit Cards (page 2 of 3)



4

4

5

5

4

4

5

5

6

6

7

7

6

6

7

7

Digit Cards (page 3 of 3)



8

8

9

9

8

8

9

9

WILD
CARD

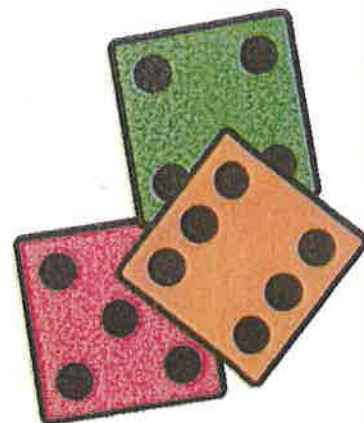
WILD
CARD

WILD
CARD

WILD
CARD

Dice Games

Created by Lacey Yates
[Wild About Teaching!](#)

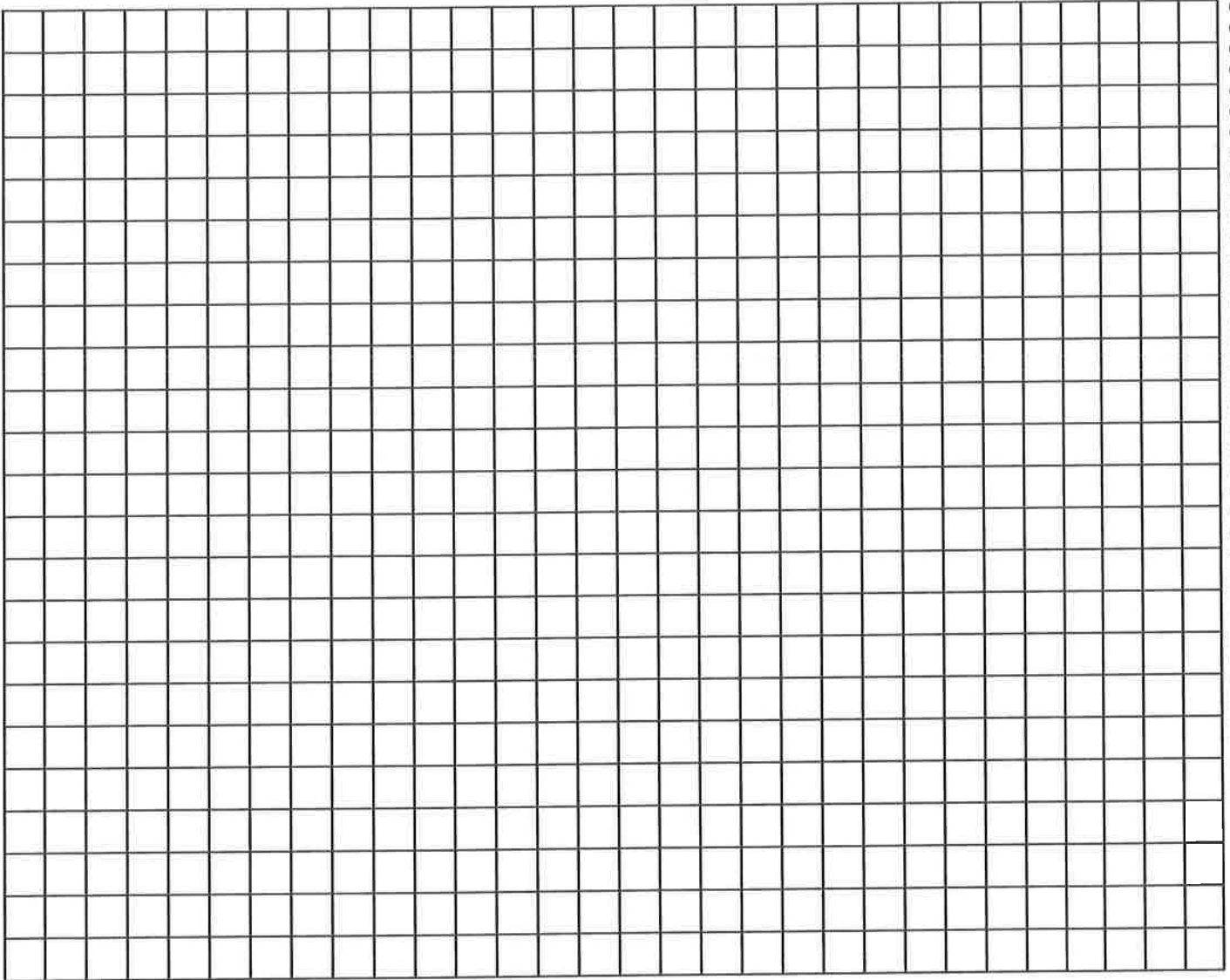


Perimeter

- Can be used with single dice, multiple dice, or dice-in-dice.
- Students roll the dice (twice if using one die) and draw a shape with sides those lengths.
 - ex: If I rolled a 6 and a 2, I would draw a rectangle with 2 sides 6 squares long and 2 sides 2 squares long.
- Students must then identify which had the largest perimeter and which had the smallest.

Name: _____

PERIMETER



What was the largest perimeter? _____

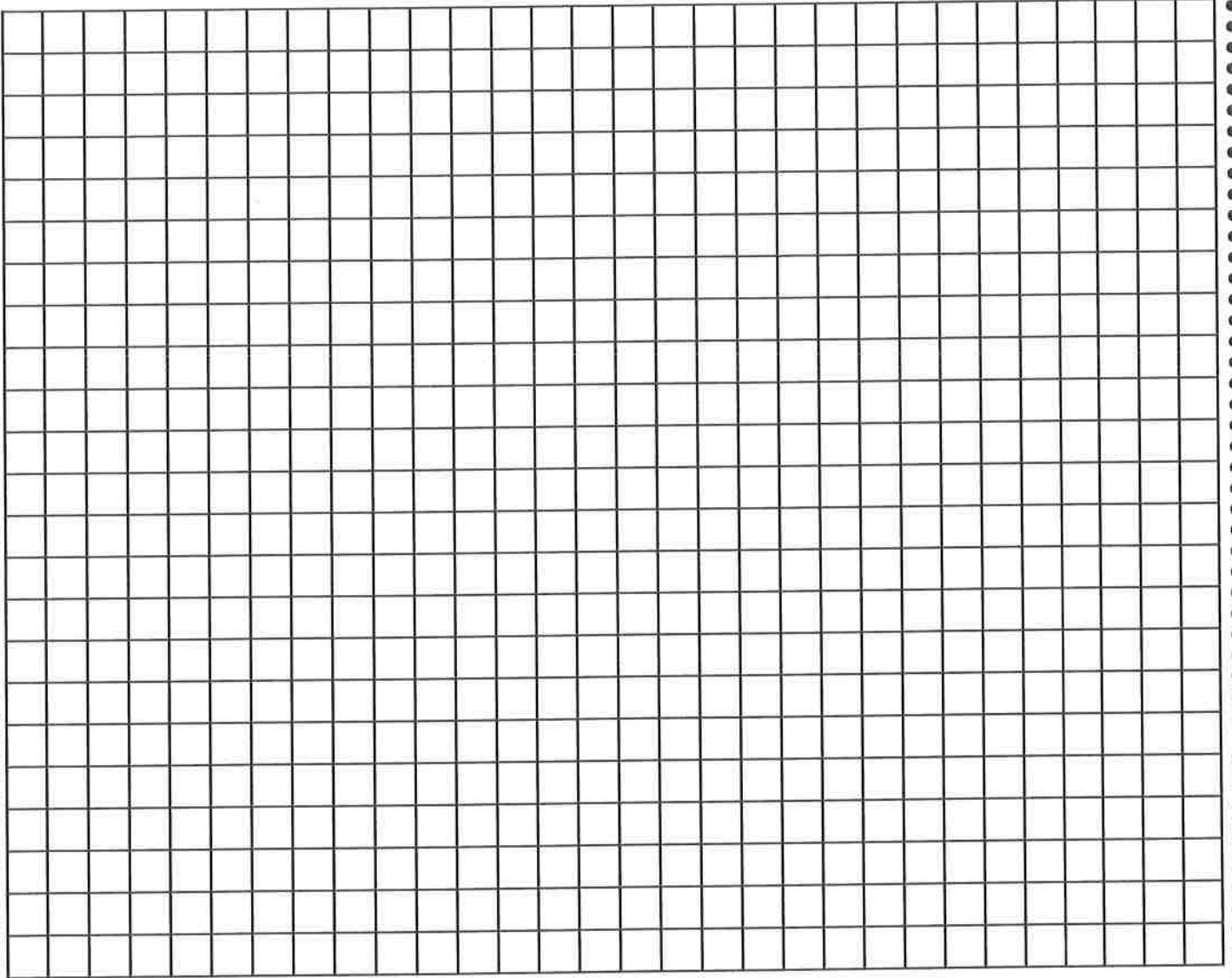
What was the smallest perimeter? _____

Area

- Can be used with single dice, multiple dice, or dice-in-dice.
- Students roll the dice (twice if using one die) and draw a shape with sides those lengths.
 - ex: If I rolled a 6 and a 2, I would draw a rectangle with 2 sides 6 squares long and 2 sides 2 squares long.
- Students must then identify which had the largest area and which had the area.

Name: _____

Area



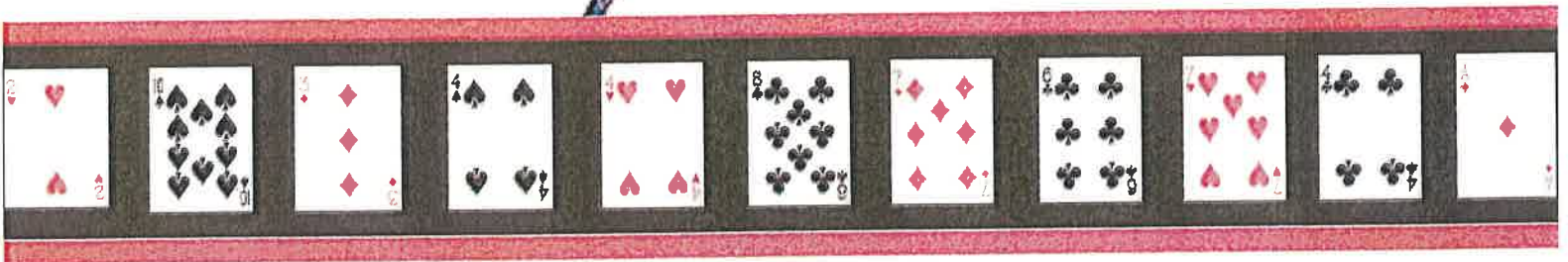
What was the largest area? _____

What was the smallest area? _____

A Collection of Math Games

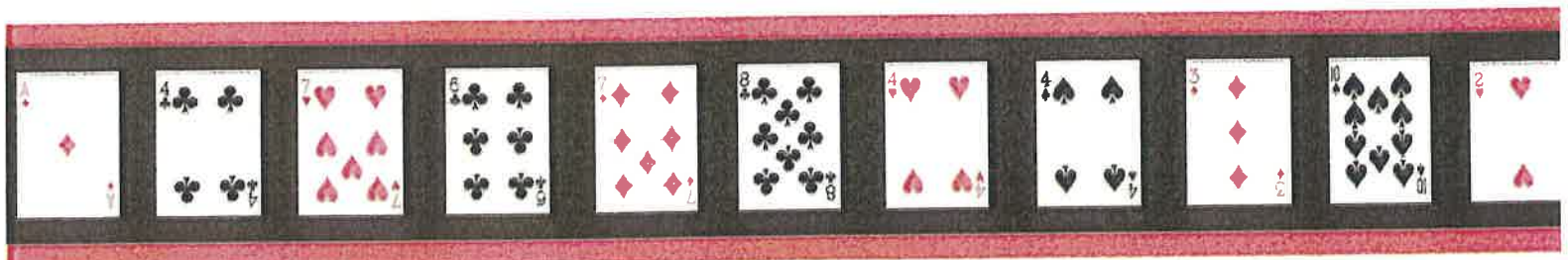
Playing Math

(One Deck At A Time!)



The Positive Engagement Project

Making a difference...not a dollar.



Advanced Addition Number Battle (Grades 1 - 6)

Players: Groups of two

Materials: Deck of cards, Ace worth 11, Jack worth 12, Queen worth 13, King worth 14

Skill: Number recognition and addition

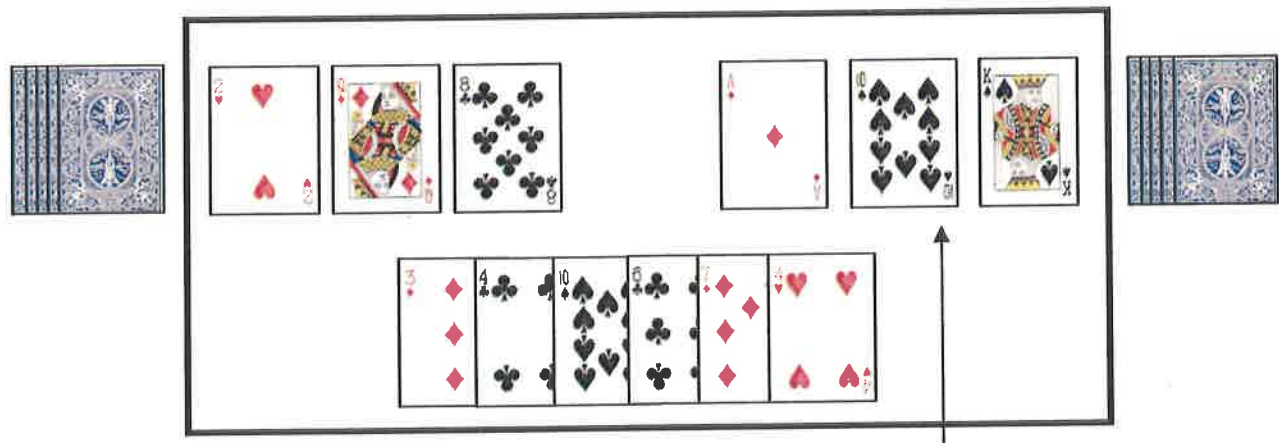
How to Play: Players split a deck of cards and simultaneously flip over their top three (or four) cards.



Player 1: sum is 25

Player 2: sum is 27

The highest sum wins all six (or eight) cards.



Player 1: sum is 23

Player 2: sum is 35

If the cards sums have the same value, the cards are placed in a center pile. The next hand is played normally and the winner of the next addition number battle takes the center pile as well.

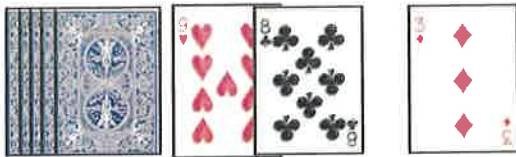
Multi-Digit Subtraction Number Battle (Grades 1 - 3)

Players: Groups of two

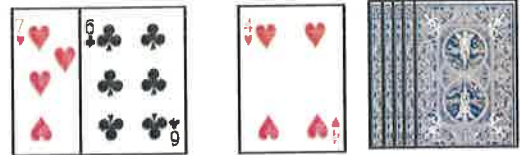
Materials: Deck of cards with the face cards and 10s removed, Ace worth one

Skill: Number recognition, place value, and subtraction

How to Play: Players split a deck of cards and simultaneously flip over their top three cards. Make two of them into a 2-digit number and subtract the third. Players may move the cards and place in any position of the number they wish.



Player 1: $98 - 3 = 95$



Player 2: $76 - 4 = 72$

The greatest difference wins all six cards.

* Note that you can increase the number of cards to flip if you are working on larger numbers.

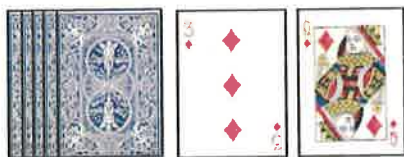
Multiplication Number Battle (Grades 3 - 6)

Players: Groups of two

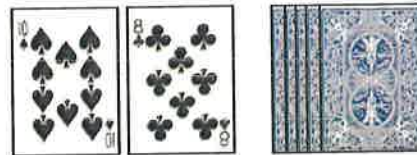
Materials: Deck of cards, face cards worth ten, Ace worth 1 or 11 (teacher decides)

Skill: Number recognition and multiplication

How to Play: Players split a deck of cards and simultaneously flip over their top two cards.

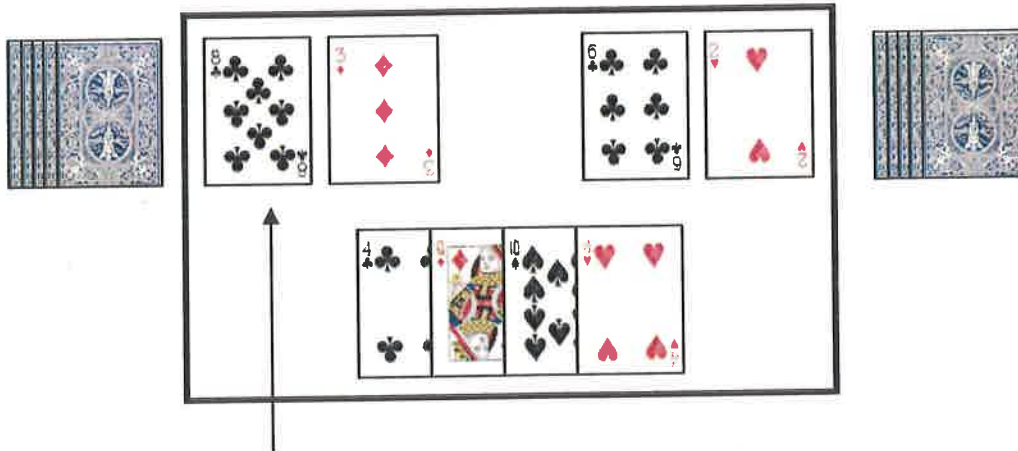


Player 1: product is 30



Player 2: product is 80

The highest product wins all four cards.



Player 1: product is 24

Player 2: product is 12

If the cards products have the same value, the cards are placed in a center pile. The next hand is played normally and the winner of the next multiplication number battle takes the center pile as well.

Advanced Multiplication Number Battle (Grades 3 - 6)

Players: Groups of two

Materials: Deck of cards, Ace worth 11, Jack worth 12, Queen worth 13, King worth 14, scratch paper

Skill: Number recognition and multiplication

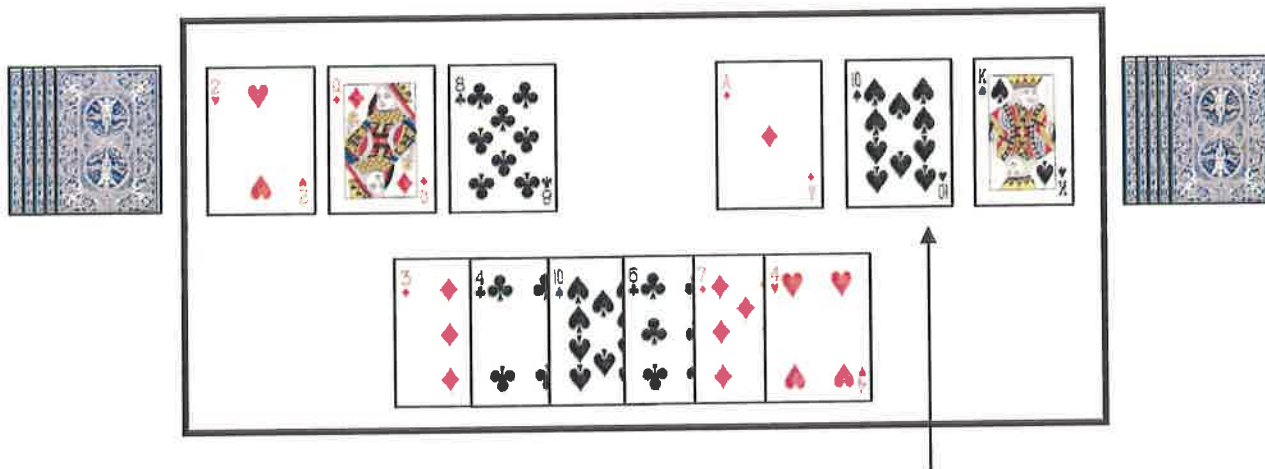
How to Play: Players split a deck of cards and simultaneously flip over their top three (or four) cards.



Player 1: product is 336

Player 2: product is 520

The highest product wins all six (or eight) cards.



Player 1: product is 208

Player 2: product is 1,540

If the cards products have the same value, the cards are placed in a center pile. The next hand is played normally and the winner of the next multiplication number battle takes the center pile as well.

Multi-Digit Multiplication Number Battle (Grades 3 - 6)

Players: Groups of two

Materials: Deck of cards with the face cards and 10s removed, Ace worth one, scratch paper

Skill: Number recognition and multiplication

How to Play: Players split a deck of cards and simultaneously flip over their top three (or four) cards. Make two of them into a 2-digit number and multiply by the third. Players may move the cards and place in any position of the number they wish.



Player 1: product is 261

Player 2: product is 384

The highest product wins all six (or eight) cards.

* Note that you can increase the number of cards to flip if you are working on larger numbers.

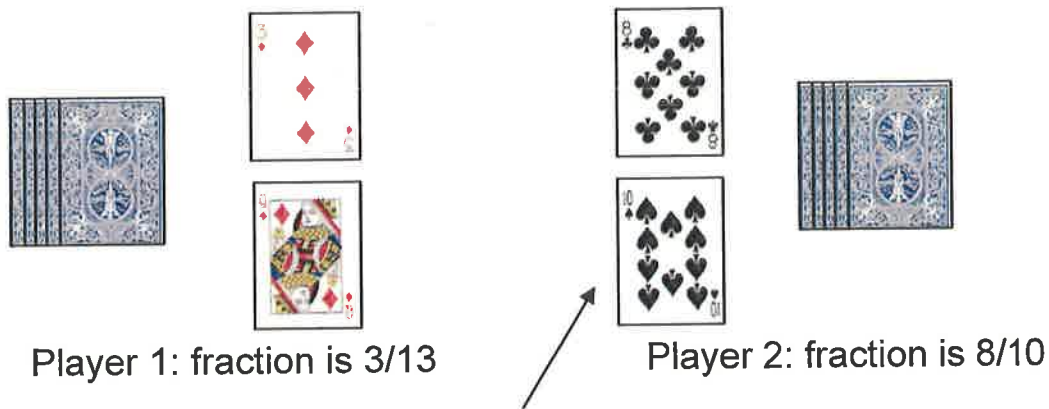
Fraction Number Battle (Grades 4 - 6)

Players: Groups of two

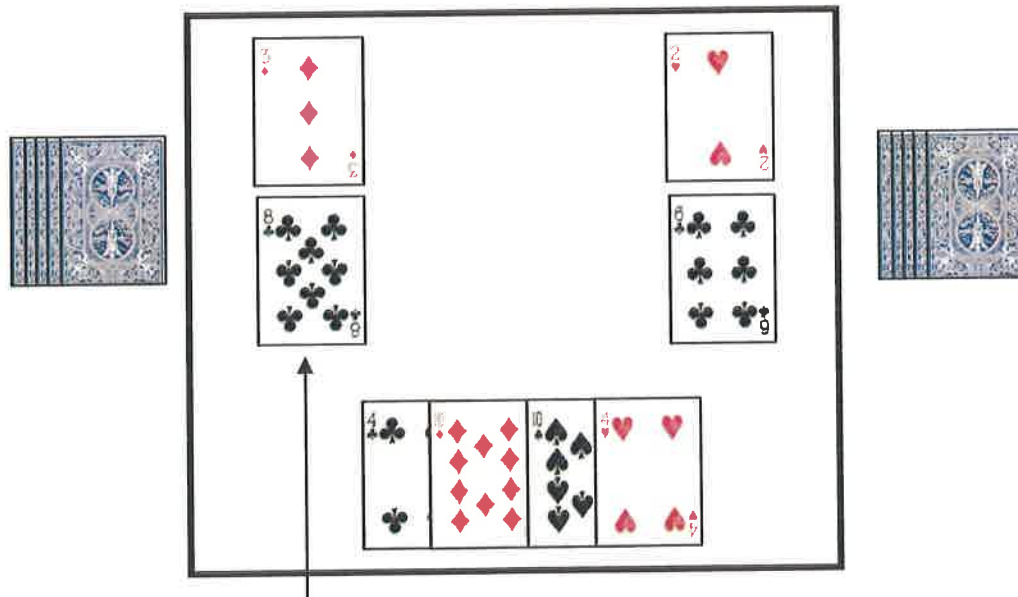
Materials: Deck of cards, Ace worth 11, Jack worth 12, Queen worth 13, King worth 14, scratch paper

Skill: Number recognition, multiplication, fractions, numerator, and denominator

How to Play: Players split a deck of cards and simultaneously flip over their top two cards, using the smaller card as the numerator.



The greatest fraction wins all four cards.



If the cards are equivalent fractions, the cards are placed in a center pile. The next hand is played normally and the winner of the next fraction multiplication number battle takes the center pile as well.

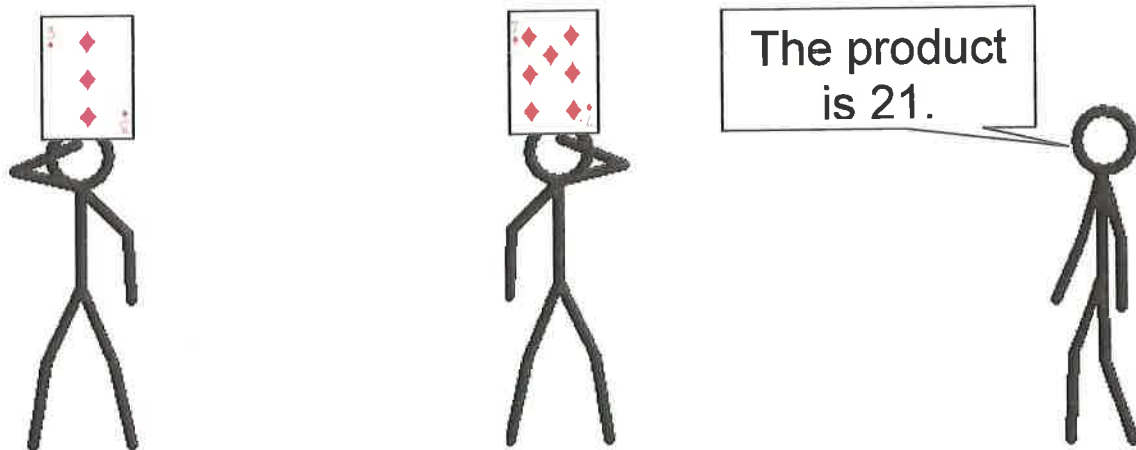
Reading Multiplication Minds (Grades 3 - 6)

Players: Groups of three (groups of four or five for more advanced)

Materials: Deck of cards

Skill: Multiplication, product

How to Play: In this game for three players, one student is the leader and the other two are the “mind readers”.



The two players each draw a card and, without looking at it, hold it up to their foreheads so that everyone else can see it, but themselves. The leader announces the products of the two cards. Each “mind reader” must figure out which card is on his or her own forehead and say it aloud. When both “mind readers” have figured out their cards, a new leader is chosen and the game continues.

With Reading Multiplication Minds, all players get practice with products and factors in every round.

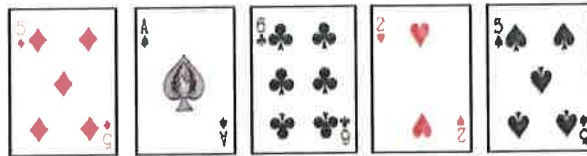
Hit The Target (Grades 4 - 8)

Players: Groups of two to five players

Materials: Deck of cards, Ace worth 1 or 11, Jack worth 12, Queen worth 13, King worth 14, scratch paper

Skill: Multiplication, addition, subtraction, division, order of operations, and mathematical reasoning

How to Play: Each group of 2 - 5 students selects a target number from 1-30. One of the players will turn five cards from the deck face up and the object is for students to make a number sentence using all five cards with any operations to reach the target number.



For example, suppose the target number is 20 and the cards in play are 5, 5, 6, 2, and Ace (worth 1).

$$5 \times 2 + 5 + 6 - 1 = 20$$

One winning combination is: $5 \times 2 + 5 + 6 - 1 = 20$. Another is $(6 \times 5) - (2 \times 5 \times 1)$. Also, $(6 \div 2) \times 5 + (5 \times 1)$ works, as do many more.

The first player to find a winning combination keeps the cards and chooses the next target number. If no combination is found in about a minute, flip over another card and try to make a combination using six cards.

To keep the game fair for players of different abilities, introduce the rule that if a player hasn't made a combination in three rounds, he or she may make combinations using four of the five cards until they make a winning combination; other players must use five.

Multiplication Zone (Grades 4 - 8)

Players: Two to four players

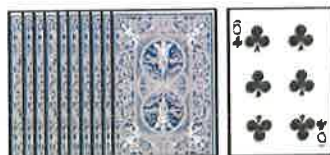
Materials: Deck of cards, Ace worth 11, Jack worth 12, Queen worth 13, King worth 14, scratch paper

Skill: Multiplication and estimation

How to Play: Each player is dealt 10 cards. A card from the remaining stack is flipped face up.



Player 1

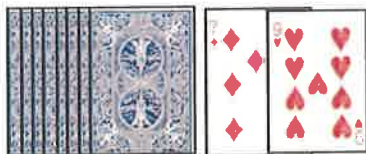


Remaining stack

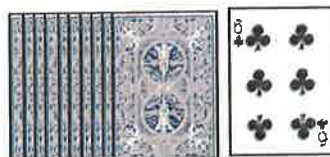


Player 2

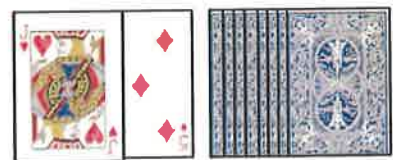
Its value is multiplied by 10, and players look at their pile of cards and try to find a pair of cards whose product is in that "decade."



Player 1: 63



Remaining stack
Zone: 60 - 69



Player 2: 60

For example, if the flipped card is a six, then the zone is any number in the sixties (60-69), so a winning pair would be 9 and 7 (product 63) or 12 and 5 (product 60), etc.

Any player who can make a pair removes those cards from his or her hand. Flip over the next card in the remaining stack to determine the next zone. Play continues until one player's hand is empty.

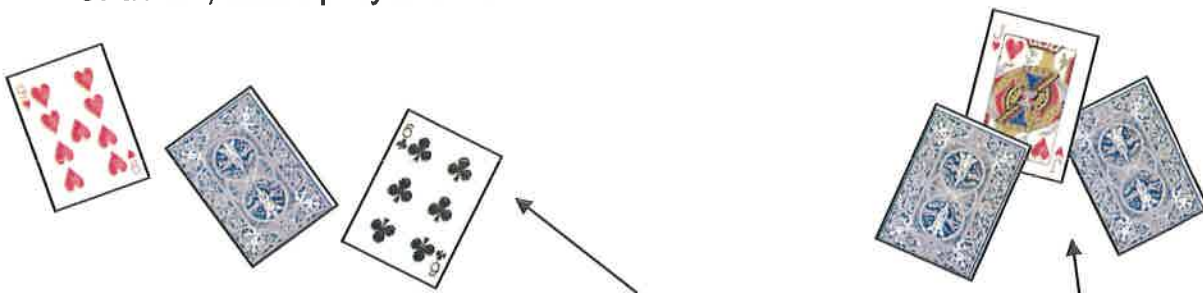
Subtraction Toss Up (Grades 4 - 6)

Players: Groups of two or more

Materials: Deck of cards, Ace worth 11, Jack worth 12, Queen worth 13, King worth 14, scratch paper

Skill: Addition, subtraction, positive and negative integers

How to Play: Each player draws three cards from the deck. On the count of three, each player tosses their cards into the air.



Player 1: sum is 15, then subtract the face down card

Player 2: sum is 12, then subtract the face down cards

Each player adds only their own cards that land face up and then subtracts the card(s) that land face down. Points are earned for the difference of all of the cards. It is possible for answers to go into the negatives, so only play this game if students have been introduced to both positive and negative integers. The first player to reach a designated amount of points wins (50 or 100).

* In this particular game, card color does NOT determine if a number is positive or negative.

* Make sure students don't toss their cards too close to one another or too high.

Multiplication Toss Up (Grades 3 - 5)

Players: Groups of two or more

Materials: Deck of cards, Ace worth 11, Jack worth 12, Queen worth 13, King worth 14, scratch paper

Skill: Multiplication

How to Play: Each player draws three cards from the deck. On the count of three, each player tosses their cards into the air.



Player 1: product is 54



Player 2: product is 12

Each player multiplies only their own cards that land face up. Points are earned for every card that lands face up. The first player to reach a designated amount of points wins (100 or 200).