Math

2019 PCCE Convention.

Presented by Alan Riewe

Alan.riewe@lethsd.ab.ca

https://mrriewe.schoolsites.ca/math-2-die-4

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All games and more are available on https://mrriewe.schoolsites.ca/math-2-die-4

Place value Battle Royale!

A class wide game of skill and chance in which you roll a die and write down the number in order to try to create the largest number.

Setup

- Each student should have the same amount of tickets. Short game 3 tickets, Average game 5 tickets long game 7 tickets.
- Designate an area of the room for people with dice and without dice to go.

How to Play

Step 1: Have every student find a partner. When they have a partner have each group get a die (either 6 or 10 sided).

Step 2: Each player rolls the die the lowest person goes first (note this is the only time a player will roll to indicate order.)

Step 3: Player 1 rolls the die and writes the number into any open space on their ticket. Once a number has been written in a space it cannot be changed. Then player two rolls the die and writes the number into any open space on their ticket. Players alternate rolling the die and writing in a number till the ticket is full.

Step 4: The two players compare their numbers. The person with the higher number gets to take the opponents ticket and keeps the die.

Step 5: The players go to the designated dice and no dice spot and play the next available player. In the opposite spot provided they did not play that person already this game.

Winning

The winner is the person with the most tickets at the end of the game. (Blank tickets do not count.

Battle Royale Tickets

Line Er Up Forecast Game Sheet

Forecast

Thousands | Hundreds | Tens | Ones
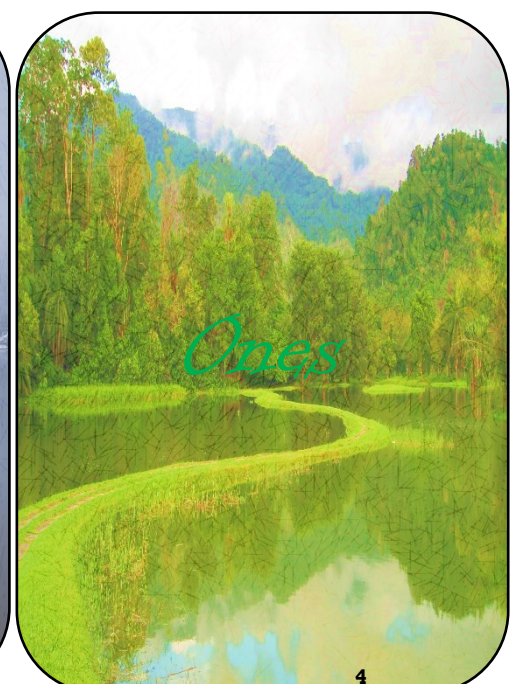
Line Er up Forecast

Set up: Sort out the deck of cards so that each player has a King, Queen, a Jack and a 10. These will be used to make your prediction. Shuffle the rest of the cards together and place them in the center of the board.

To see who goes first each player will draw a card from the top of the deck. The person with the lowest card goes first. They will shuffle the deck and then select their first card.

Goal of the game is to gain the most points by predicting if their number will be the highest, middle or lowest number.

Part 1 Forecast: Each player has A king, Queen, Jack and a 10. They will place one of these cards face down in their forecast spot depending on what they hope to do.

- King- means they think they will get the highest number.
- Queen- means you think you will get the middle number either middle number will get you a point.
- Jack- means you think you will get the lowest number.
- **** Advanced**** If you are not playing with the decution rule place the 10s to the side. 10 is the deduction card. This card will take away a point. If anyone guessed that they would get the spot you would get they lose a point. So if someone predicted that they would get the high spot but the person playing the 10 got the high spot that means the person making the prediction would lose a point. However, if no one predicted the spot that the 10 occupied that means the person who forecast the 10 will lose a point.

Part 2 game play: Starting with the person who drew the lowest card Each player will select a card and place it in one of the place value spots. Once a card has been played it cannot be moved. Once all players have selected their cards then the forecast cards are flipped over and the round is scored.

Scoring: Each player will get 1 point if they made a correct prediction. If a 10 has been played, then a deduction will be done however a player at no point can have a negative point value. SO if a player has no points they cannot lose any points.

Once scoring has been completed the cards are shuffled and a new round begins with each player forecasting. A standard game is 10 rounds.

Place Value Battleship Instructions

Thousands	Hundreds	Tens	Ones
9	9	9	9
8	8	8	8
7	7	7	7
6	6	6	6
5	5	5	5
4	4	4	4
3	3	3	3
2	2	2	2
1	1	1	1
0	0	0	0
Your answer			
5	**7**	**1**	**6**

1. Find a good-fit partner.
2. Get a game card with the place value you are playing on it.
3. Think of a number and write it in the space provided.
4. Take turns asking each other questions. To try find your opponent's answer.
   a. Example:
      Do you have 7 tens?
      Do you have an 8 in the thousands place?
   b. If the guess is correct, it is a "hit!" Circle the number on the grid. If guess is incorrect, make an x through the number on the grid.
5. The first player to figure out the opponent's number wins and correctly reads it out loud is the winner!
   a. Reading out loud your opponents score is your turn. If a player does not read the number correctly it becomes the other players turn and they can read out the number or guess another number.
   b. A player can not guess a number and read out the opponent's number on the same turn.

Place Value Battleship

Thousands	Hundreds	Tens	Ones
9	9	9	9
8	8	8	8
7	7	7	7
6	6	6	6
5	5	5	5
4	4	4	4
3	3	3	3
2	2	2	2
1	1	1	1
0	0	0	0
Your answer			

Place Value Battleship

Ten Thousands	Thousands	Hundreds	Tens	Ones
9	9	9	9	9
8	8	8	8	8
7	7	7	7	7
6	6	6	6	6
5	5	5	5	5
4	4	4	4	4
3	3	3	3	3
2	2	2	2	2
1	1	1	1	1
0	0	0	0	0
Your answer				

Place Value Battleship

Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
9	9	9	9	9	9	9
8	8	8	8	8	8	8
7	7	7	7	7	7	7
6	6	6	6	6	6	6
5	5	5	5	5	5	5
4	4	4	4	4	4	4
3	3	3	3	3	3	3
2	2	2	2	2	2	2
1	1	1	1	1	1	1
0	0	0	0	0	0	0
Your Answer						

100 Rolls Rules

What you need:

- 1 dice
- A 100 rolls score sheet.
- A pencil

The rules are simple.

Step 1: Roll the die 100 times. Each time record your roll in one of the shaded numbered spots.

 Step 2: Add together your rolls. The game sheet is set up so that you add the first two numbers and get a total then you add that number to the next roll.

Example:

If you roll at 5 you would record it in the top spot, then roll the dice again, if it was a 3 you would put that in the next space. If your next roll is a 6 it would go in the #3 spot.

When you are adding you would first add spaces 1 and 2 and get the total of 8. Your next roll was a 6 so you add that to the 8 and get 14.

 See what is the highest number you can get in 100 rolls.

1
5
2
3
8
3
6
14

100 Rolls

Scoring sheet

1		10		18		26		35		43	
2											
3	11	19	27	36	44
4	12	20	28	37	45
5	13	21	30	38	46
6	14	22	31	39	47
7	15	23	32	40	48
8	16	24	33	41	49
9	17	25	34	42	50

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98
99
100

Race to 1000 rules

What you need:

- A Partner
- 4 dice
- A Race to 1000 sheet or 2 pieces of paper

The rules are simple. Roll two dice select one number to go in the tens place value and one number in the ones pace value. Roll the dice again placing one number in the tens place value and one number is the ones value. Then add the two numbers together. Keep rolling the dice, placing one in the tens place value and one in the ones place value and adding them up. The first person to get to 1000 shouts 1000. The other player checks over the first person's math. If they find a mistake before the first person can roll doubles then the first person has to go back to the spot they made the mistake. If no mistake is found the first player wins.

Example

If I rolled a 4 and a 6 I would put the four in the ones place value and the 6 in the tens place value.
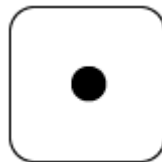
		6	4
1			
2			

If my next roll was a 3 and a 5, I would place the 5 in the tens place value and 3 in the ones place value. Then I would add the two numbers together.

		6	4
		5	3
1	1	7	

If I then roll a one and a three, I would place the 3 in the tens value and the one is the ones value and would add the numbers together.

1	1	7
	3	1
1	4	8

RACE TO 1000!

1											
2			12			22			32		
3			13			23			33		
4			14			24			34		
5			15			25			35		
6			16			26			36		
7			17			27			37		
8			18			28			38		
9			19			29			39		
10			20			30			40		
11			21			31			41		

ADDITION DICE 6

#	1	2	3	4	5	6
1	2	3	4	5	6	7
2	3	4	5	6	7	8
3	4	5	6	7	8	9
4	5	6	7	8	9	10
5	6	7	8	9	10	11
6	7	8	9	10	11	12

| #	❖	❖	❖	❖	❖	❖
❖	10	12	11	9	8	7
❖	5	4	7	6	5	10
❖	8	2	7	9	3	6
❖	6	5	3	8	10	4
❖	7	9	5	6	4	7
❖	8	6	9	7	6	8

Rules:

1. Role both dice. Add the two numbers and colour in the matching square.
2. If you roll doubles you get to go again.
3. The first person to get 3 in a row, vertically, horizontally or diagonally wins a round.
4. **Best 2 out of 3 wins.**

This game requires 2 six sided dice.

#	❖	❖	❖	❖	❖	❖
❖	10	12	11	9	8	7
❖	5	4	7	6	5	10
❖	8	2	7	9	3	6
❖	6	5	3	8	10	4
❖	7	9	5	6	4	7
❖	8	6	9	7	6	8

Addition Dice game (12 sided dice)

#	1	2	3	4	5	6	7	8	9	10	11	12
1	2	3	4	5	6	7	8	9	10	11	12	13
2	3	4	5	6	7	8	9	10	11	12	13	14
3	4	5	6	7	8	9	10	11	12	13	14	15
4	5	6	7	8	9	10	11	12	13	14	15	16
5	6	7	8	9	10	11	12	13	14	15	16	17
6	7	8	9	10	11	12	13	14	15	16	17	18
7	8	9	10	11	12	13	14	15	16	17	18	19
8	9	10	11	12	13	14	15	16	17	18	19	20
9	10	11	12	13	14	15	1	17	18	19	20	21
10	11	12	13	14	15	16	17	18	19	20	21	22
11	12	13	14	15	16	17	18	19	20	21	22	23
12	13	14	15	16	17	18	19	20	21	22	23	24

The Rules

1. Role both dice.

2. Add the two numbers together and colour in the matching square.

3. If you roll doubles you get to go again.

4. The first person to get 2 lines of 4 in a row, vertically, horizontally or diagonally wins a round.

This game requires 2 – 12 sided dice.
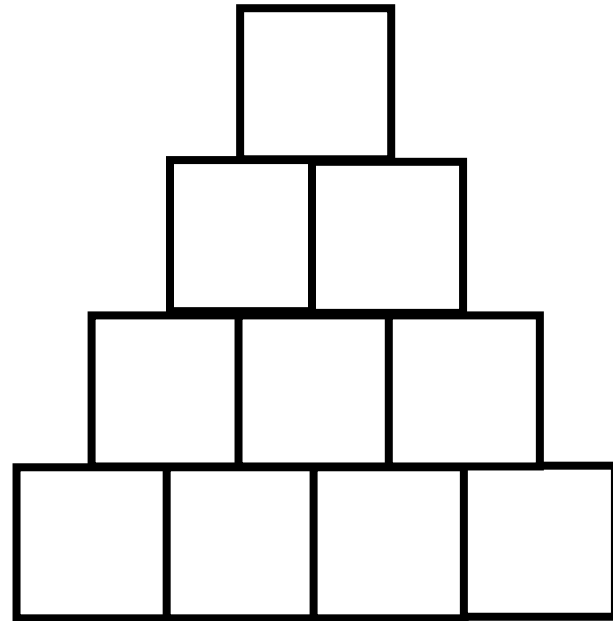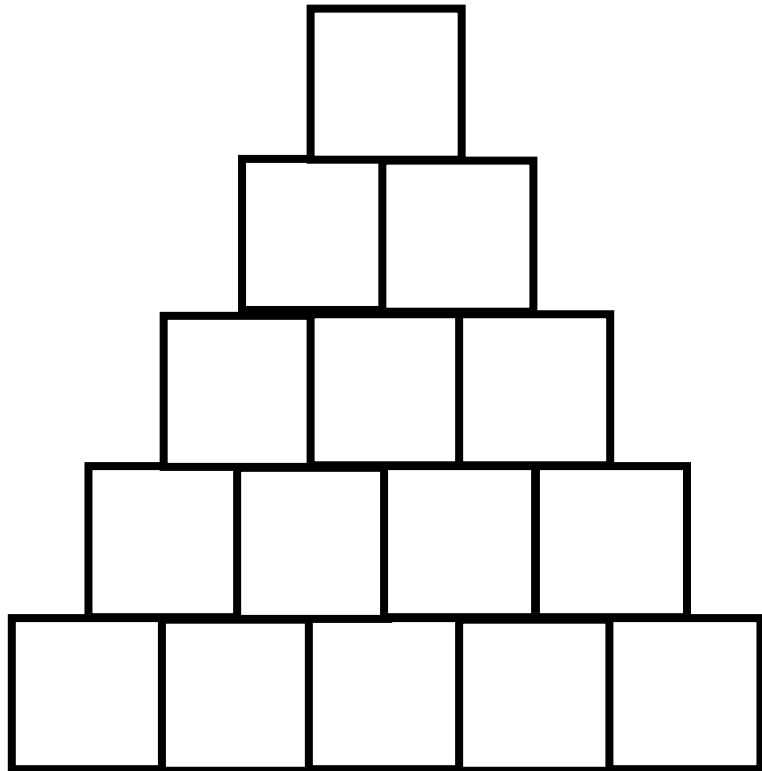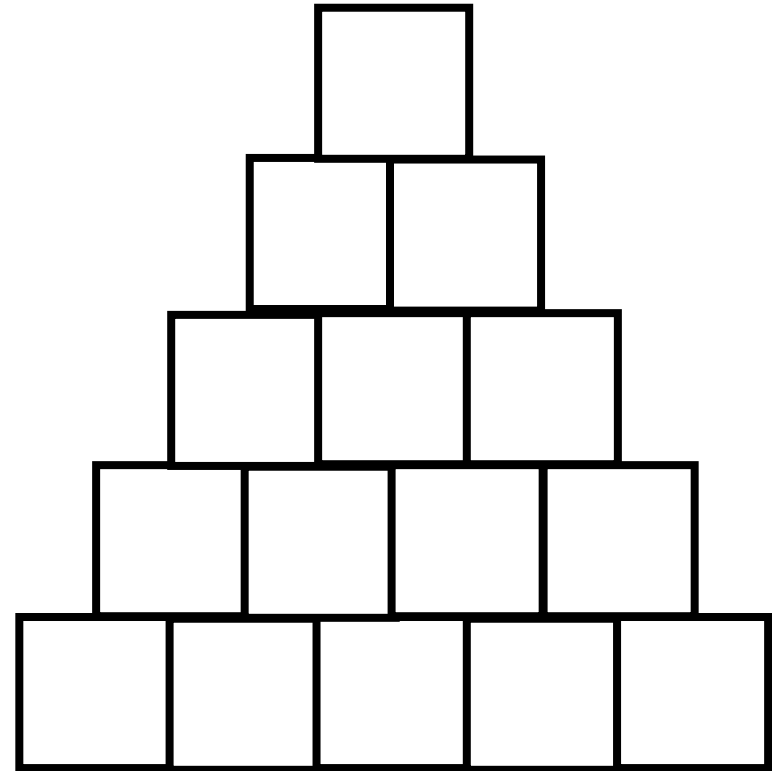
The Number Pyramid Contest (4 spots)

Roll a die 5 times. Pick your best 4 rolls. Then fill bottom 4 squares on pyramid using those 4 rolls. Using the rules of a Math pyramid, the bottom 2 squares add up to the square above. Try to get the highest number at the top as you can.
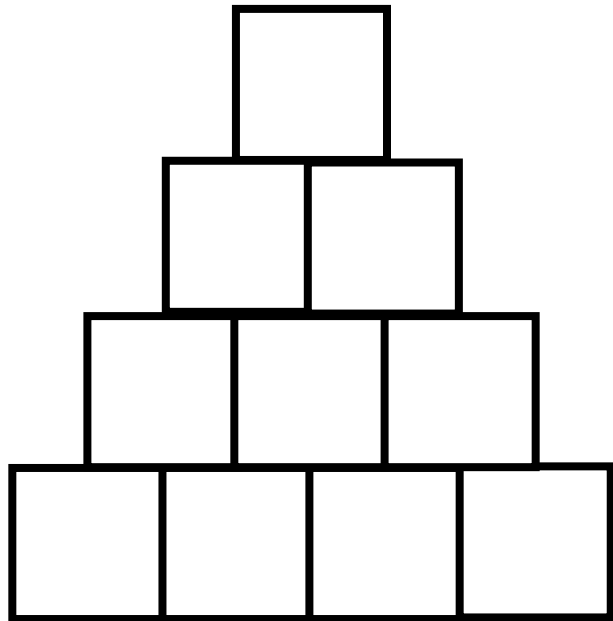
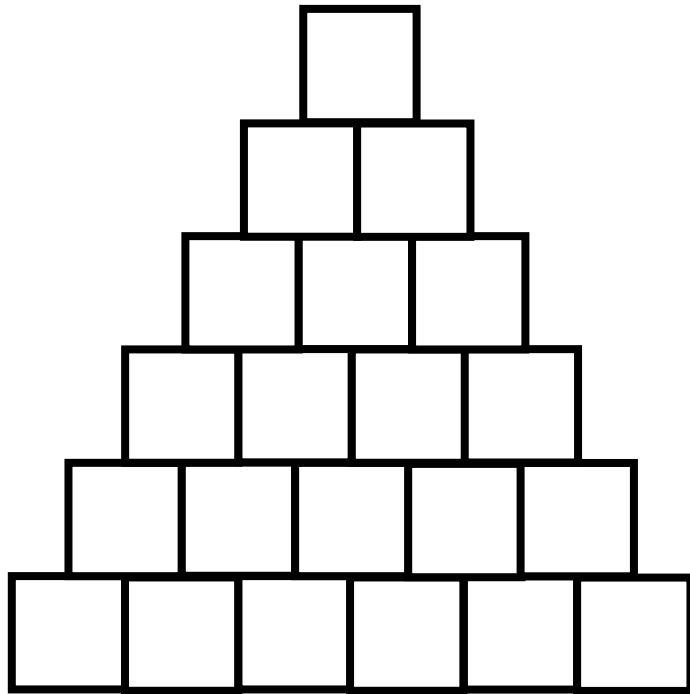| Rolls				
1	2	3	4	5

The Number Pyramid Contest (5 spots)

Roll a die 6 times. Pick your best 5 rolls. Then fill bottom 5 squares on pyramid using those 5 rolls. Using the rules of a Math pyramid, the bottom 2 squares add up to the square above. Try to get the highest number at the top as you can.

Rolls					
1	**2**	**3**	**4**	**5**	**6**

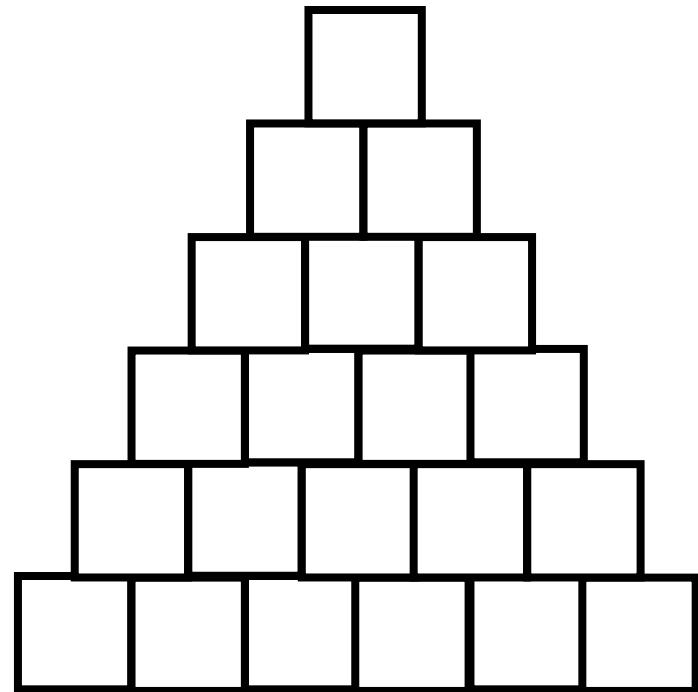| Rolls					
1	**2**	**3**	**4**	**5**	**6**

The Number Pyramid Contest (6 spots)

Roll a die 7 times. Pick your best 6 rolls. Then fill bottom 6 squares on pyramid using those 6 rolls. Using the rules of a Math pyramid, the bottom 2 squares add up to the square above. Try to get the highest number at the top as you can.

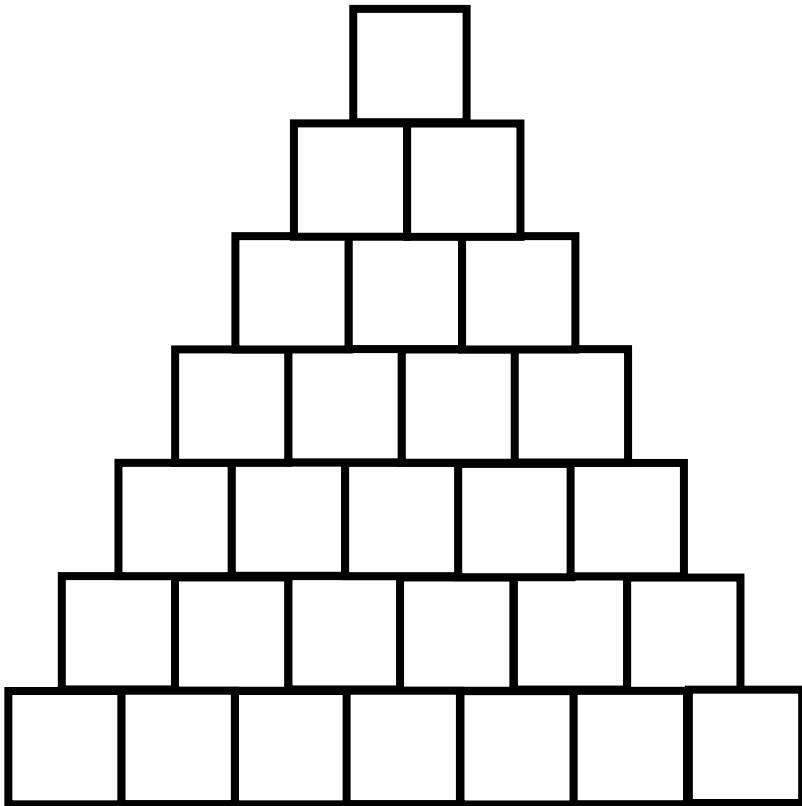| Rolls						
1	2	3	4	5	6	7

The Number Pyramid Contest (7 spots)

Roll a die 8 times. Pick your best 7 rolls. Then fill bottom 7 squares on pyramid using those 7 rolls. Using the rules of a Math pyramid, the bottom 2 squares add up to the square above. Try to get the highest number at the top as you can.

	Rolls						
1	2	3	4	5	6	7	8

The Number Pyramid Contest (7 spots)

Roll a die 8 times. Pick your best 7 rolls. Then fill bottom 7 squares on pyramid using those 7 rolls. Using the rules of a Math pyramid, the bottom 2 squares add up to the square above. Try to get the highest number at the top as you can.

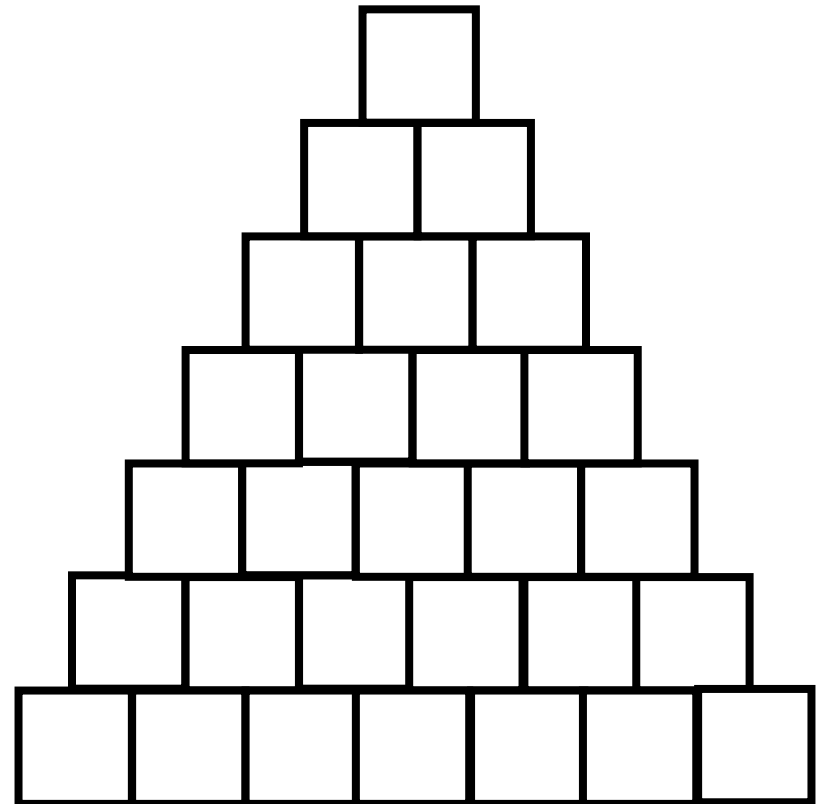|	Rolls						
1	2	3	4	5	6	7	8

The Number Pyramid Contest (8 spots)

Roll a die 9 times. Pick your best 8 rolls. Then fill bottom 8 squares on pyramid using those 7 rolls. Using the rules of a Math pyramid, the bottom 2 squares add up to the square above. Try to get the highest number at the top as you can.

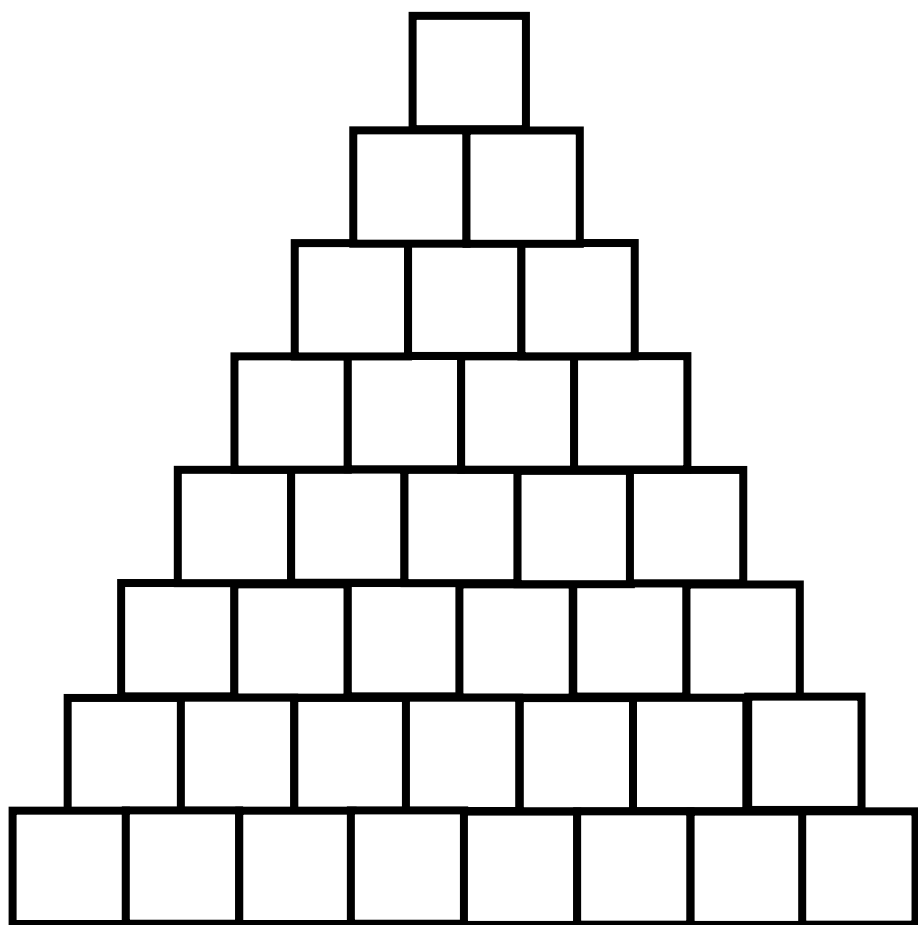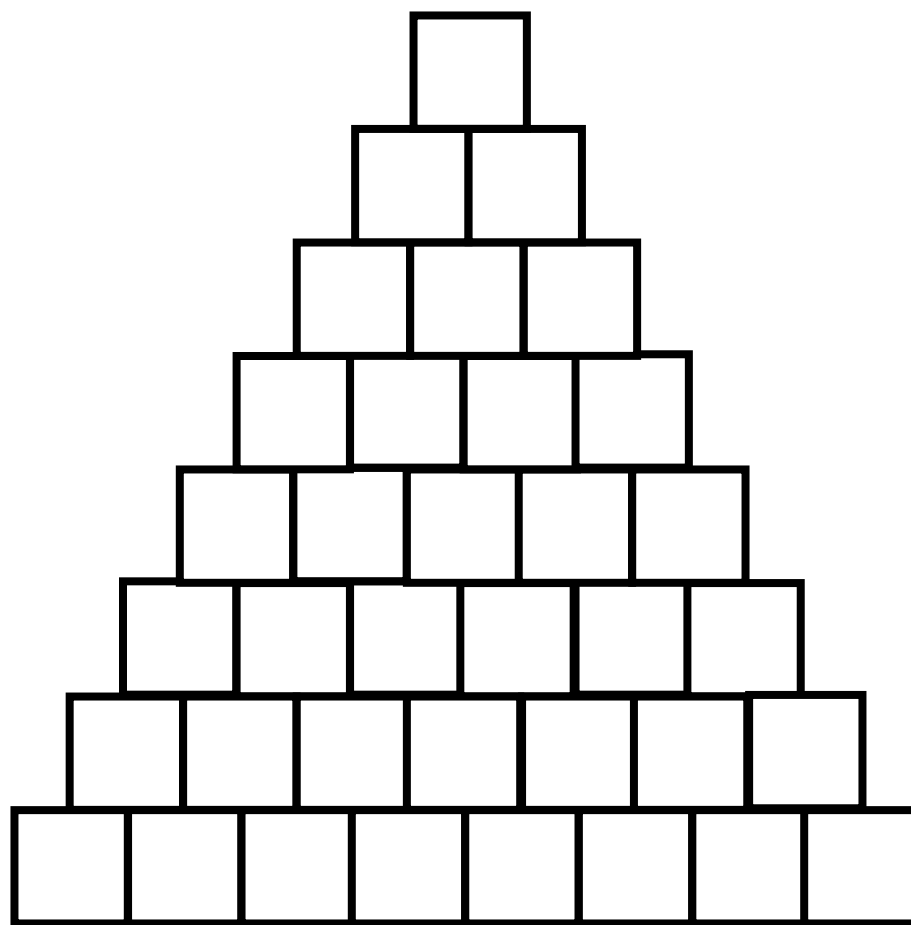|		Rolls						
1	2	3	4	5	6	7	8	9

The Number Pyramid contest

Roll a die 10 times. Pick your best 9 rolls. Then fill bottom 9 squares on pyramid using those 9 rolls. Using the rules of a Math pyramid, the bottom 2 squares add up to the square above. Try to get the highest number at the top as you can.
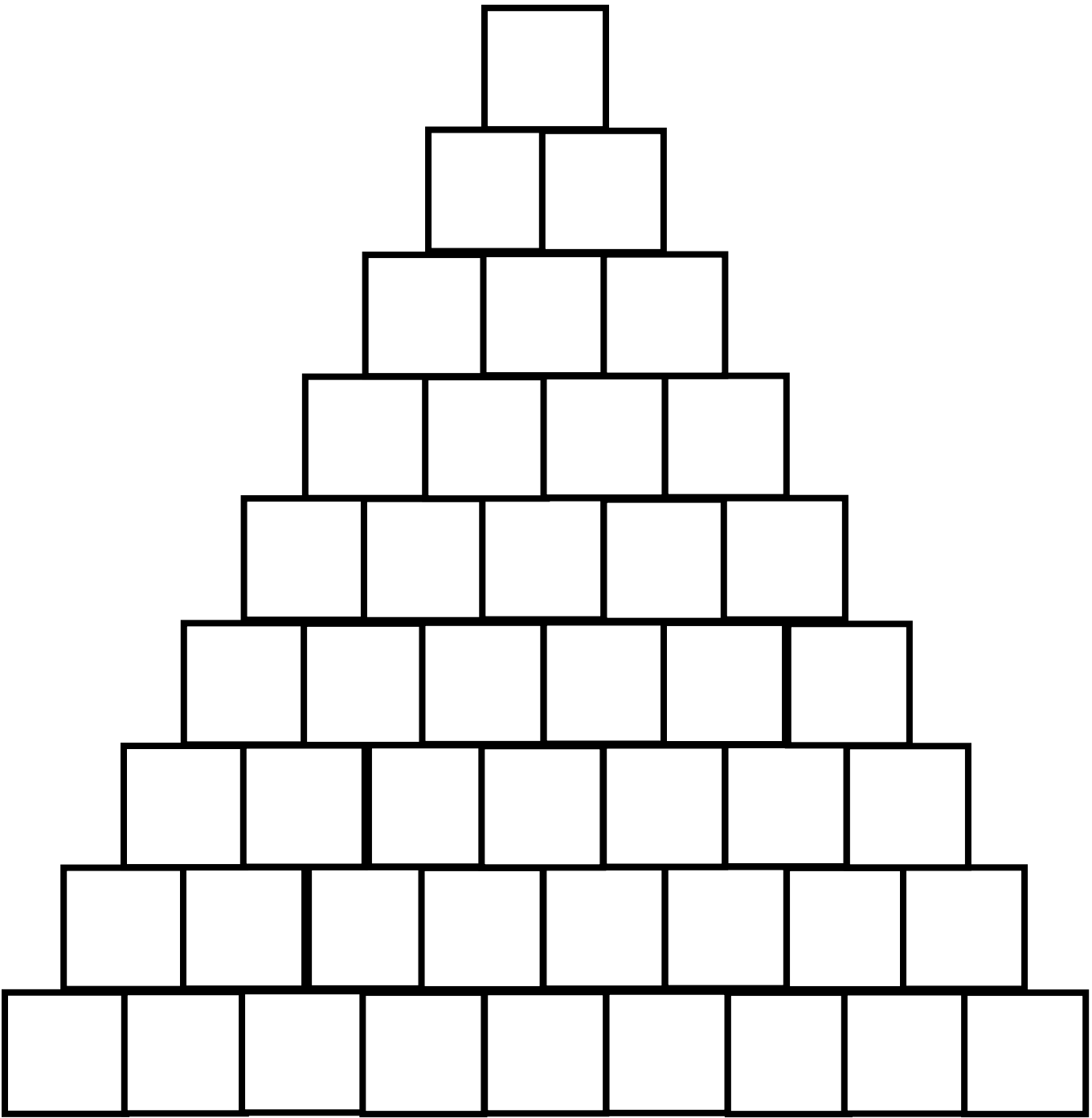
Rolls									
1	2	3	4	5	6	7	8	9	10

30's

What you need:

- 6 dices
- 2 pads or pieces of paper
- 2 pencils

The objective

The object of the game is to take away all of your opponents points before they can eliminate all of your points. You do this by adding up all 6 of the dice to 30 or higher.

Starting the game

Each player starts with 30 points written on a T chart. Each player rolls one die, the player which rolls the highest number is the one who gets to go first.

Each turn

At the start of each turn the object is to get 30 or higher.

Start the turn by rolling all 6 dice.

Roll 1   Keep   Keep
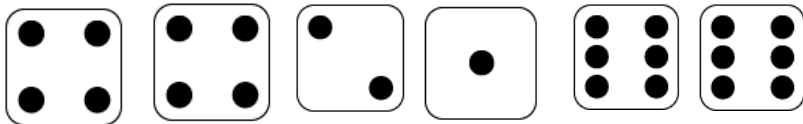
Select the dice you would want to keep and place them to the side. In this case you would want to keep the two sixes and roll the rest of the dice again. Each time you roll the dice you need to keep at least 1 of the die. Before rolling the remaining dice the player needs to state how much the kept dice add up to. So in this example it would be 12.

Roll 2

Keep   Kept   Kept
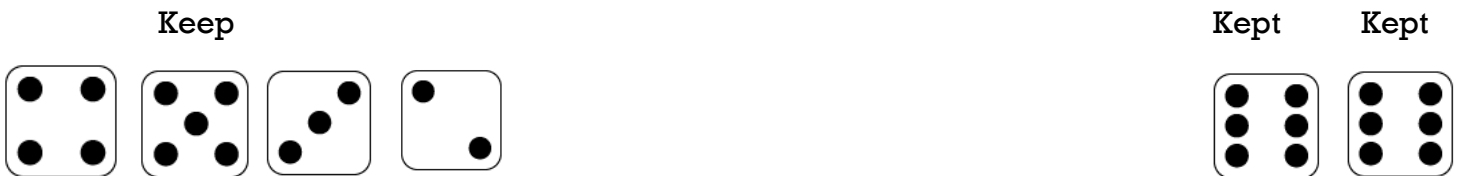
Select the dice you would want to keep, state home much they add up to and roll the remaining dice.

Keep   Kept   Kept   Kept

When all the dice are totalled one of three things can happen.

Scenario 1

If the person has ran out of turns and they are still under 30 they will minus however many they are under 30 from their own score.

Example

Player 1	Player 2
~~30~~	30
28	

This hand adds up to 28 so Player one would minus 2 points from their own score.

Scenario 2

If they get exactly 30. Nothing happens with the score it simply becomes the next players turn.

Example

Player 1	Player 2
30	30

Scenario 3
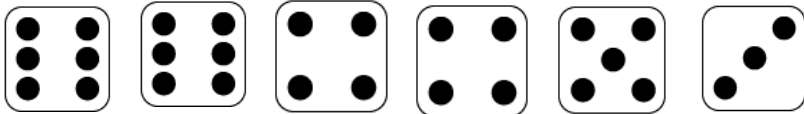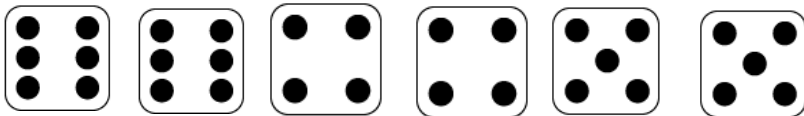
If the player get over 30 as shown below then they will get a chance to roll the dice again to minus points from the other persons score. The player who got over 30 will get to roll all 6 dice again. This time they are looking to get as many of a specific dice as possible. If the player gets 32 that would mean they are trying to get as many twos all twos. The number the person would be going for is on the chart beside. Just like with the first part of the turn they must keep one die each time they roll. They keep rolling till they do not get one of that die or till they run out of dice. Then they minus one point from the opponents score for ever die they rolled of the number. So if they rolled 3 twos before not rolling any other two they would minus three points from their opponents score.

Total	Trying to get
31	Ones
32	Twos
33	Threes
34	Fours
35	Fives
36	sixes

Example
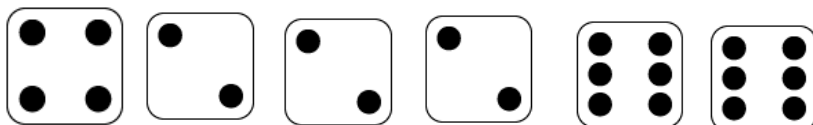
Player 1	Player 2
30	~~30~~
	27

If this person rolled 3 twos they would minus three from their opponents school.

One final rule once a player is below 10 they may choose to instead of minusing points from their opponent's score they have the choice of adding those points to their own score. So if I am below ten and I get 33 and roll 4 threes I can either minus 4 from my opponents score or add 4 to my own score.

Line Er up High Low

Least				Greatest			
TH	H	T	O	Th	H	T	O

1. To start each person draws a domino, the person with the lowest number (both sides combined) gets to go first.
2. Each player takes turns drawing a dominion placing it on the game board. All pieces must be fully into the game space (you cannot have a piece hanging over the edge.)
3. When the game boards are full each player subtracts the lowest from the greatest. The person with the greatest number in between their numbers wins the round and gets a point for that round.
4. Repeat the process for 9 rounds

Round 1	Round 2	Round 3
Round 4	Round 5	Round 6
Round 7	Round 8	Round 9

Race to the bottom

What you need:

- 1 dice
- A 100 rolls score sheet.
- A pencil

The rules are simple.

Step 1: Roll the die 100 times. Each time record your roll in one of the shaded numbered spots.

 Step 2: Subtract your rolls from 300 and see if you can get all the way to zero.

Example:

If you roll at 5 you would record it in the top spot, then roll the dice again, if it was a 3 you would put that in the next space.

When you are Subtraction you would take your first roll which was 5 from 300 which equals 295. Next you would subtract your #2 roll from 295 which is 292.

 See how quickly you can get to zero (if you can at all)

300
1 5
295
2 3
292

Race to the Bottom

Scoring sheet

300					
1	9	17	25	34	42
2	10	18	26	35	43
3	11	19	27	36	44
4	12	20	28	37	45
5	13	21	30	38	46
6	14	22	31	39	47
7	15	23	32	40	48
8	16	24	33	41	49

50		67		84	
59	76	85	93
51	68	77	85
60	77	86	94
52	69	86	
61	78	87	95
53	70	87	
62	79	88	96
54	71	88	
63	80	89	97
55	72	89	
64	91	90	98
56	73	90	
65	82	91	99
57	74	91	
66	83	92	100
58	75	92	

Regroup Roundup

What you need

9- Hundreds base 10 blocks   1 10 sided die

19- ten base 10 blocks   1 Regroup round up game board.

19 ones base 10 blocks   A score sheet.

Set up

First each player needs to roll the die, the person with the lowest number will get to set up the game board and the person with the highest roll will get to take the first turn.

To set up the board first roll the die and then select the amount of hundreds blocks, next roll the dice again and take that amount of tens blocks and finally roll the die one more time and take that amount of ones blocks. This will be your starting number.

Taking turns

The person rolls the die and then subtract the number the player rolled from the total by separating that amount of ones blocks. Regrouping the pieces if necessary. Make sure to take the points for regrouping. Then it is the next persons turn.

Regrouping is done by placing the piece you would like to regroup in the place value spot and exchanging it for the appropriate amount of the next place value down. This exchange is confirmed correct by the person to the players left.

Points

If you regroup from the tens to ones you get one point

If you regroup from the hundreds to the tens, then from the tens to the ones you get 3 points.

Finishing the game

There are multiple ways to finish the game. One of the following needs to be selected by either the teacher or the participants.

Play to zero

Play to a certain number of points, 20, 30, 50, 100.

Play a certain amount of time or rounds.

MULTIPLYING DICE 6

#	1	2	3	4	5	6
1	1	2	3	4	5	6
2	2	4	6	8	10	12
3	3	6	9	12	15	18
4	4	8	12	16	20	24
5	5	10	15	20	25	30
6	6	12	18	24	30	36

#	1	2	3	4	5	6
1	1	2	3	4	5	6
2	2	4	6	8	10	12
3	3	6	9	12	15	18
4	4	8	12	16	20	24
5	5	10	15	20	25	30
6	6	12	18	24	30	36

Rules:

1. Role both dice. Multiply the two numbers and colour in the matching square.
2. If you roll doubles you get to go again.
3. The first person to get 3 in a row, vertically, horizontally or diagonally wins a round.
4. **Best 2 out of 3 wins.**

This game requires 2 six sided dice.

#	1	2	3	4	5	6
1	1	2	3	4	5	6
2	2	4	6	8	10	12
3	3	6	9	12	15	18
4	4	8	12	16	20	24
5	5	10	15	20	25	30
6	6	12	18	24	30	36

Multiplying Dice Game

#	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

The Rules- (6 sided dice)

1. Role all four dice. Add together the dice that match in colour.
2. Multiply the two numbers and colour in the matching square.
3. If you roll doubles you get to go again.
4. If you role all 4 the same number you get to colour in any square you choose.
5. The first person to get 2 lines of 4 in a row, vertically, horizontally or diagonally wins a round.

This game requires 4 dice. 2 of one colour and 2 of another colour.

Multiplying Dice Game

Multiplying Dice game (12 sided dice)

#	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

The Rules

1. Role both dice. Multiply the two numbers and colour in the matching square.

2. Multiply the two numbers and colour in the matching square.

3. If you roll doubles you get to go again.

4. The first person to get 2 lines of 4 in a row, vertically, horizontally or diagonally wins a round.

This game requires 2 – 12 sided dice.

Double Dice Dilemma Round 1			
+	-	X	F

Roll	Points	Total Points

Double Dice Dilemma Round 2			
+	-	X	F

Roll	Points	Total Points

Double Dice Dilemma   Round 1

+	−	X	÷	F

Roll	Points	Total Points

Double Dice Dilemma   Round 2

+	−	X	÷	F

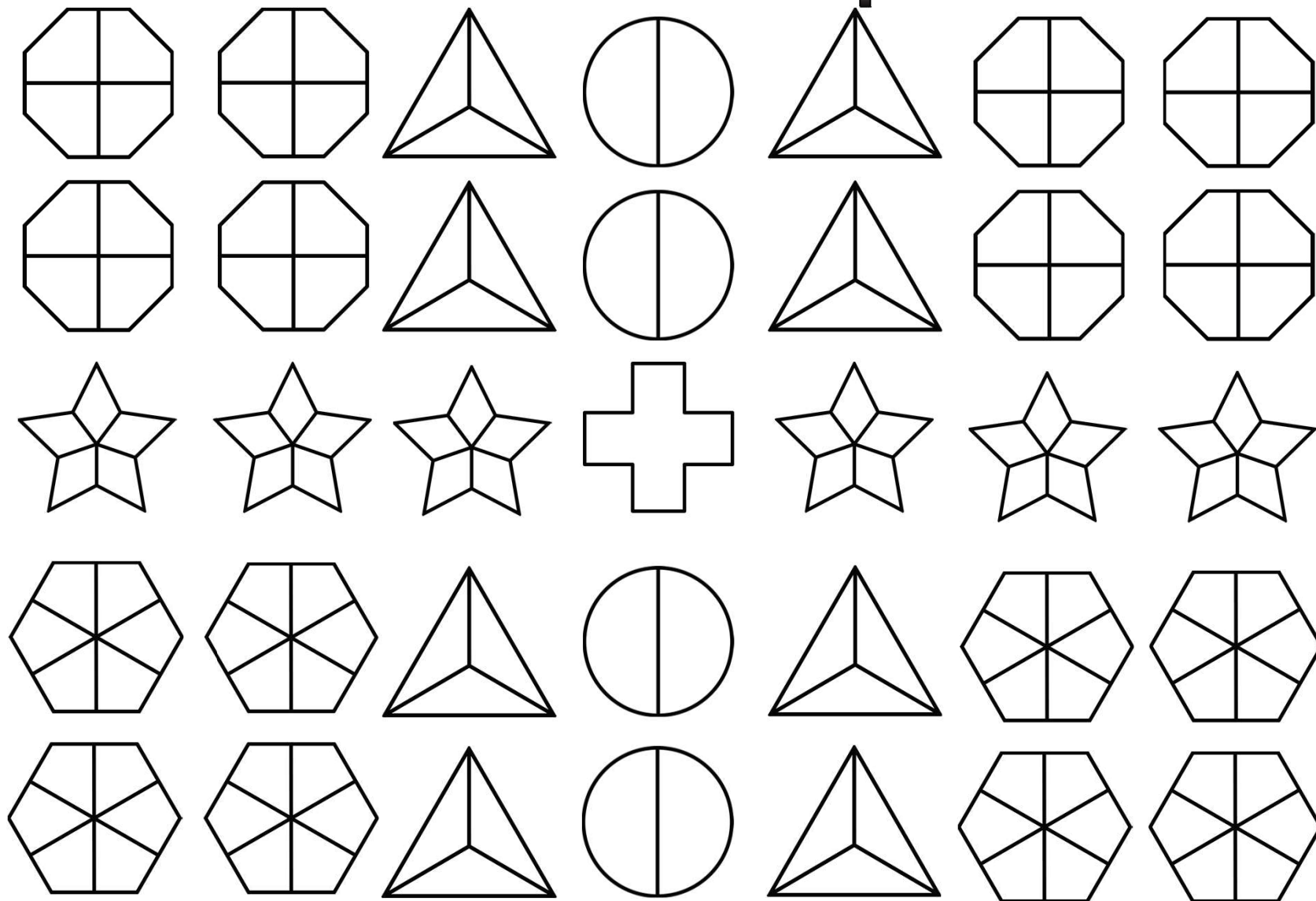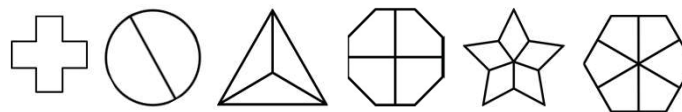| Roll	Points	Total Points

Fraction Fill up

Fraction Fill up

- **Materials:** A game sheet, 2 dice, 2 different colour pencil crayons.

Purpose: is to claim more shapes than your opponent.

How to play the game:

Starting: Each player rolls the 2 dice the one with the larger fraction gets to go first.

Game play: A player rolls the two dice together. The lower numbers becomes the numerator the higher number becomes the denominator. Then the player may colour in that exact fraction of spaces on the board.

Hint: You may use equivalent fractions however a fraction can not be split between two denominators.

For example a 4 and a 6 can be $\frac{4}{6}$ or $\frac{2}{3}$ but you can not colour in $1\frac{1}{3}$ and $2\frac{1}{6}$

Once a player has colored in more than half the shape. The shape is claimed as their own.

Winning: The game ends when there are no more shapes to claim.

If the two players have the same amount of shaped the person with the one whole shape wins.