


**box cars  
and  
one-eyed jacks<sup>®</sup>**

Presents



**What's your  
Game  
Plan?**

Presented by  
**Jane Felling • Joanne Currah**

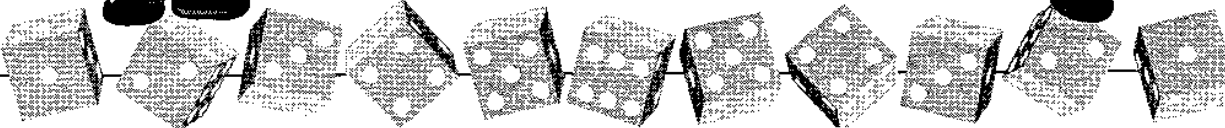


**Phone (780) 440-MATH**  
**[boxcars@planet.eon.net](mailto:boxcars@planet.eon.net)**

All rights reserved.

Except as noted, no part of this publication may be reproduced or transmitted in any form or by any means without the prior written or verbal permission of the publisher.

Written permission must be obtained and a licensing fee issued through Box Cars for the sole purposes of inservicing other professional educators or parent communities.







# HORSE RACE

4 LEVELS  
OF  
PLAY

2 DICERS  
2 PLAY



This is a game for two Dicers to play at one time. Players use one tray divided so that each player uses only their half.

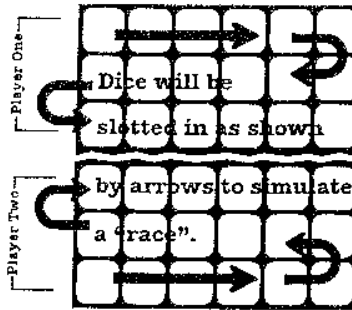
## TO BEGIN

Each Dicer chooses eighteen dice of their own colour and these are removed from the tray.

## THE GOAL

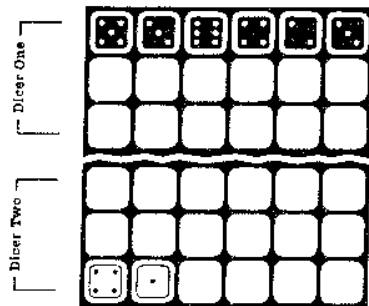
The goal of the game is to have the most dice in your side of the "horse race track" after all dice have been rolled out for the round. Dicers roll two dice at one time.

Dicers add their two dice and compare their sums. The Dicer with the greatest sum places them into their side of the "horse race track". Their opponent places their two dice into the lid (losing side). Dicers pick up two new dice, roll, add and compare their sums. The Dicer with the greatest sum places them into their side of the "horse race track" and their opponent places them into the lid. In the event of a tie sum, both Dicers place their dice into their own side of the "horse race track". Dicers roll out all remaining dice. The Dicer with the most dice on their side of the "horse race track" after nine tosses, is the winner.



The tray is divided between the two players as shown.

## EXAMPLE



Play After 3 of 9 Rounds.

### Toss 1

Dicer One + = 8 → WINS and places dice in tray

Dicer Two + = 2 → Tosses dice into lid

### Toss 2

Dicer One + = 10 → WINS and places dice in tray

Dicer Two + = 2 → Tosses dice into lid

### Toss 3

Dicer One + = 10 → TIE both players place dice in tray

Dicer Two + = 2

## LEVEL 1

Play is outlined above, Dicers roll two dice and add.

## LEVEL 2

Play as described in above rules, but now Dicers roll three dice and add for the greatest sum. The Dicer with the greatest sum (answer) places them into their side of the "horse race track".

$$\begin{matrix} \blacksquare & + & \blacksquare & + & \blacksquare & = & 9 \end{matrix}$$

## LEVEL 3

Play as described in above rules, but now Dicers roll two dice and multiply  $\blacksquare \times \blacksquare = 20$  for the greatest product. The Dicer with the greatest product (answer) places them into their side of the "horse race track".

## LEVEL 4

Play as described in above rules, but now Dicers roll three dice, add two, and multiply by the third for the greatest product. See example.

The Dicer with the greatest product places them into their side of the "horse race track".

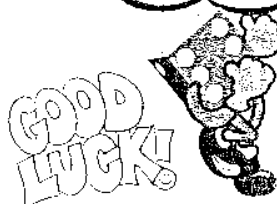


$$(5 + 3) \times 6 = 48 \rightarrow \text{Best Choice}$$

$$(6 + 3) \times 5 = 45$$

$$(6 + 5) \times 3 = 33$$

You will have to do some thinking here to create the best possible answer for your roll. Will there always be 3 possible answers?



# Addition TIC TAC TOE

	0	1	2	3	4	5	6	7	8	9
0	0	1	2	3	4	5	6	7	8	9
1	1	2	3	4	5	6	7	8	9	10
2	2	3	4	5	6	7	8	9	10	11
3	3	4	5	6	7	8	9	10	11	12
4	4	5	6	7	8	9	10	11	12	13
5	5	6	7	8	9	10	11	12	13	14
6	6	7	8	9	10	11	12	13	14	15
7	7	8	9	10	11	12	13	14	15	16
8	8	9	10	11	12	13	14	15	16	17
9	9	10	11	12	13	14	15	16	17	18

or Adding Fact Family TIC TAC TOE

# MULTIPLICATION TIC TAC TOE

- LEVEL:** Grade 4 - 6
- SKILLS:** multiplication facts to 81, using a multiplication table
- PLAYERS:** 2
- EQUIPMENT:** cards (Ace=1) - 12 (Jack=11) (Queen=12) or two 12-sided dice, paper, pens, markers of two different colours, multiplication table to 144 (see reproducibles)

**GETTING STARTED:** Players select a colour of marker. The goal of the game is for players to get three or more of their markers in a row, either vertically, horizontally or diagonally. Player number one begins by drawing two cards and multiplying them together; verbalizing this fact to their opponent. A player would then cover all possible locations (ie: 2 x 8 , 8 x 2, 4 x 4 if their product was sixteen) with their markers. Player number two then takes a turn. Players alternate turns until a player gets three or more of their markers in a row. When this happens, the player removes their markers and counts two points for each (ie. six points for three in a row or eight points for four in a row).

Players can steal an opponent's space in two different ways. First, when a player makes a product already occupied by an opponent, they replace their opponent's markers with their own. Each marker replaced is worth five points. Second, after a player verbalizes that their turn is over, the opponent gets an opportunity to cover any combinations that the opponent missed (ie. if the product is 6 and player number one covers 2 x 3 and 3 x 2 and says that they are finished, player number two can cover 1 x 6 and 6 x 1). No points are awarded for this type of steal. If a player draws two cards that they already have, they may draw two new cards.

Players continue to alternate turns for a set period of time. At the end of play the player with the most points wins.

# MULTIPLICATION TIC TAC TOE

	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

0 1 2 3 4 5 6 7 8 9

0									
1									
2									
3									
4									
5									
6									
7									
8									
9									

Box Cars and One-Eyed Jacks

## Two-Digit Scramble

**LEVEL:** Grade 1 - 2  
**SKILLS:** place value to 100, betweenness  
**PLAYERS:** 2  
**EQUIPMENT:** cards (Ace = 1) - 9, paper, pencil  
**GETTING STARTED:** Each player makes a gameboard as follows: (See appendix for reproducible page)

- 10 - 19 \_\_\_\_\_
- 20 - 29 \_\_\_\_\_
- 30 - 39 \_\_\_\_\_
- 40 - 49 \_\_\_\_\_
- 50 - 59 \_\_\_\_\_
- 60 - 69 \_\_\_\_\_
- 70 - 79 \_\_\_\_\_
- 80 - 89 \_\_\_\_\_
- 90 - 99 \_\_\_\_\_

Each player turns over two cards and makes a two-digit number. Players call their number out loud. Players write down the number in the appropriate space on their gameboard, (ie: 27 would go on the line for 20 - 29). The first player to get all ten spaces filled in is the winner. Numbers must fall between, (ie: 19, 29, 39, etc. cannot be used).

## T-Ball Addition

Grade 2 - 3 and up  
 adding three-digit numbers, no regrouping  
 2  
 Cards (Ace = 1) - 4, paper, pencil  
 Each player takes six cards. Players arrange their cards to make a three-digit addition problem without regrouping. The object is to make the greatest sum possible.

Player 1	Player 2
draws 4, 4, 3, 3, 2, 1	draws 4, 4, 2, 2, 3, 1
443	431
+ 321	+ 231
474	452

Player number one chooses 863, player two chooses 853. Players write their problems down and compare answers. The player with the highest sum scores one point (inning). Each player takes six new cards and play continues. The first player to score nine points (innings) is the winner.

443	431	442	431	432
+ 321	+ 421	+ 432	+ 231	+ 421
764	854	863	673	853



# TICK TOCK ROLL A CLOCK

2  
Double Dicers  
to Play



## WHAT YOU'LL NEED

Each Double Dicer needs one Three-In-A-Cube Die, paper, pencil.

## TO BEGIN

Each player needs to draw a clock as follows:

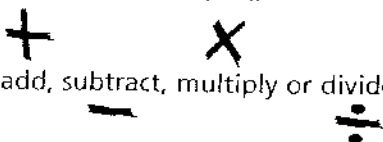


## THE GOAL

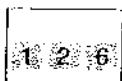
To be the first Double Dicer to circle all numbers on their clock.

## LET'S ROLL

Player One rolls the die and may now add, subtract, multiply or divide the three numbers to target any number between 1 - 12.



## EXAMPLE



Player One can circle on their clock, either:

$$6 \times 2 \times 1 = \textcircled{12} \text{ OR } 6 + 2 + 1 = \textcircled{9} \text{ OR } (6 \div 2) + 1 = \textcircled{4} \text{ etc.}$$

Players can circle only one number per roll. Players alternate rolling the die, analyzing their combinations, trying to be the first player to circle all the numbers on their clock. If a player is unable to find a combination for any of the remaining numbers, play continues to their opponent.



*Do you think there are certain numbers that will be more difficult to circle?*



*Play & Discover!*

# COMBO FIVE

**LEVEL:** Grade 3 and up  
**SKILLS:** Mixed operations (+, -, x, ÷), problem solving  
**PLAYERS:** Teams of 2 vs. 2  
**EQUIPMENT:** One 20-sided die, cards Ace - King (Ace = 1, Jack = 11, Queen = 12, King = 0)

**GETTING STARTED:** Both teams take five cards and place them face up. The goal of the game is to equal the rolled target number each round. To begin, one team rolls the target number for the round. This number will be used by both teams. Teams now begin finding combinations that equal the target number rolled - all operations may be used. A single card cannot be taken off. Teams may take off two, three, four or five card combinations. Teams may also take off a two card and a separate three card combination or two, two card combinations leaving one card behind for the next round. Each card may only be used once in any combination (ie., in the following example 4 can only be used once and not again in a second combination).

**EXAMPLE:** Cards drawn are as follows:

Team One	4	9	7	2	11
Team Two	2	3	8	10	5

Target rolled = 11

Team One made the following combinations and removed the cards as follows:

$$9 + 2 = 11 \text{ and } 4 + 7 = 11$$

leaving behind the 11 card as it was not used in any combination.

Team Two made the following combinations and removed the cards as follows:

$$(2 \times 3) + 5 = 11$$

leaving behind the 8 and 10 cards.

# SWEET 16

"A REAL FAVOURITE"

**LEVEL:** Grade 4 and up  
**SKILLS:** mixed operations, problem solving  
**PLAYERS:** 1 (solitaire) or whole class in cooperative teams  
**EQUIPMENT:** 1 thirty-sided die, cards (Ace = 1) · K, Jack = 11, Queen = 12, King = 0

**GETTING STARTED:** All teams build a four x four grid with sixteen random cards, face up.

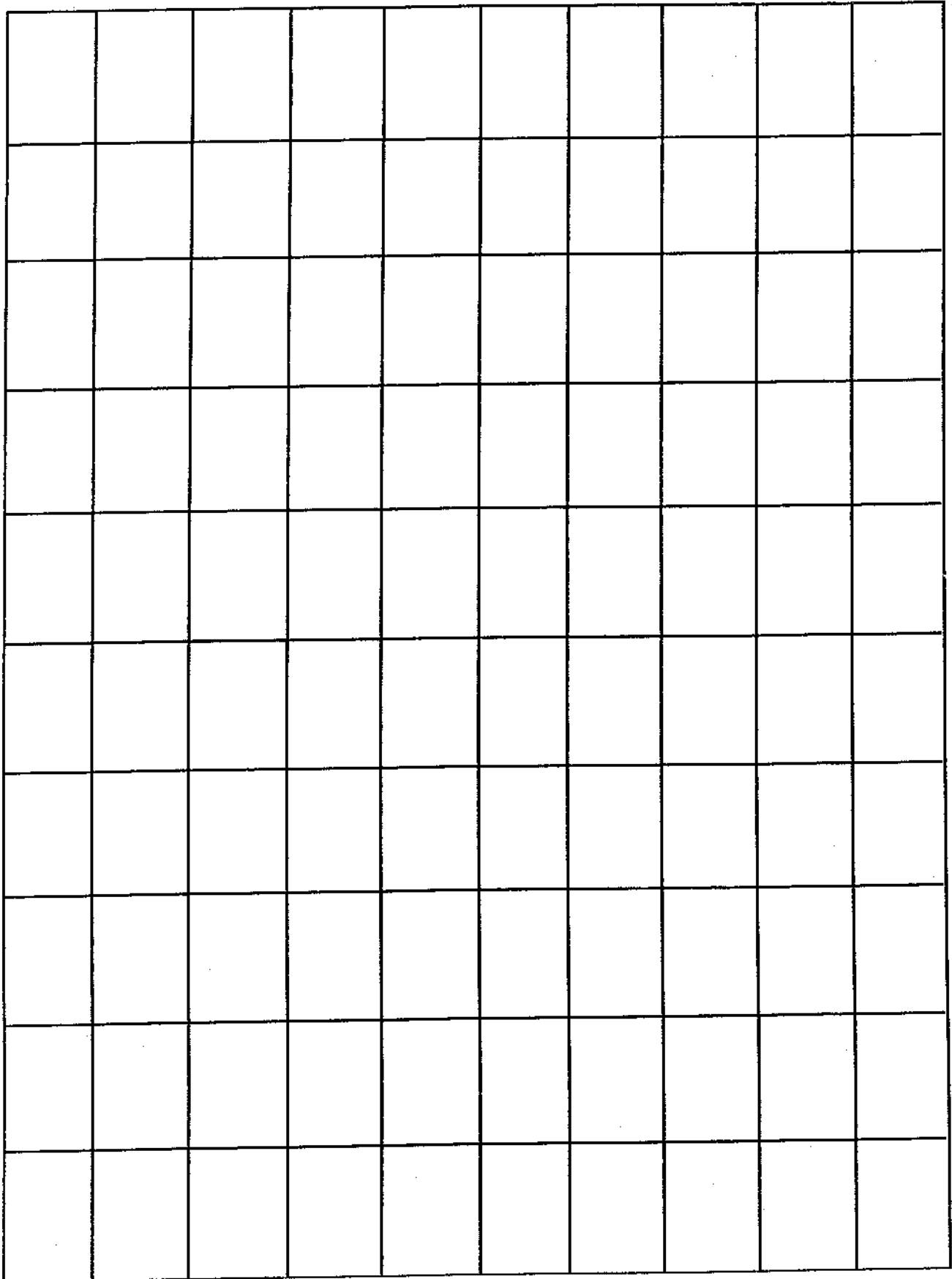
The goal of the game is for each team to remove all the cards from their grid. All cards remaining at the end of a round equal their face value score AGAINST the team, (ie. 4 and 3 left - score against = 7). The lowest and best possible score per round is zero.

To begin play the teacher rolls a target number for the first round with the die. This number will be used by all cooperative teams. Teams now begin finding combinations that equal the target number rolled - all operations may be used. Players may take off two, three, four or five card combinations.

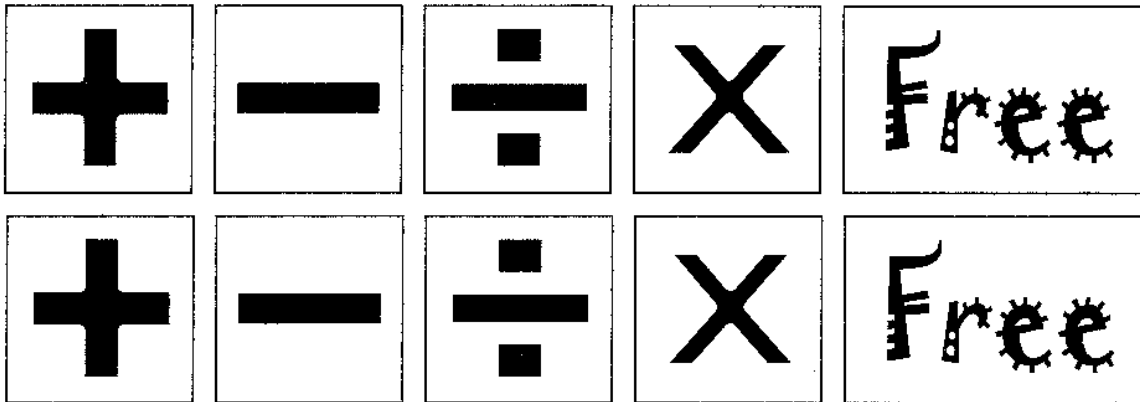
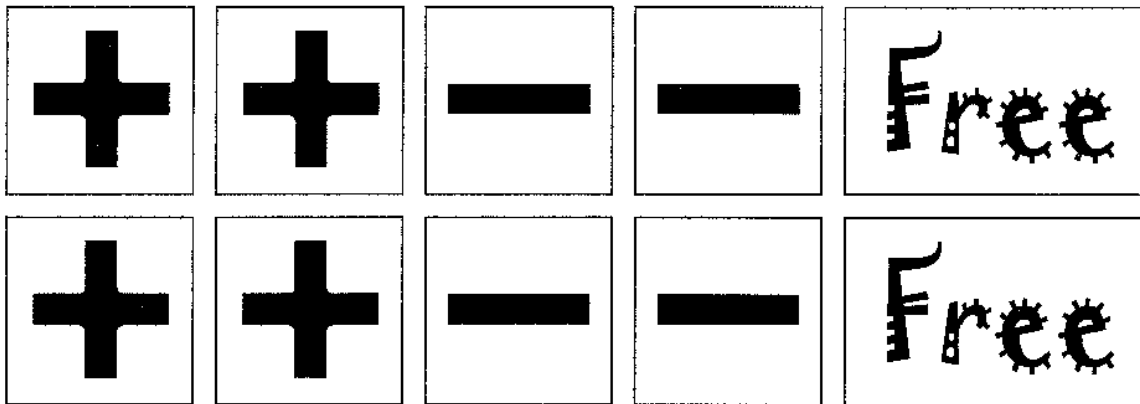
Grid was randomly drawn as follows:

King	4	10	2
Jack	3	9	7
6	Ace (1)	8	6
5	4	10	2

# Blank Hundred Board / Ten For Me



# Double Dice Decisions



**GOAL:** The greatest accumulated sum wins

- 1) Roll the double dice
- 2) Decide which operation to use and record the math sentence
- 3) Bank your points and cover up that operation. That operation cannot be used again except as a free choice
- 4) Division sentences must have a remainder of zero in order to score

**EXAMPLE:**

ROLL

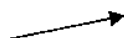
ACCUMULATED POINTS

- 1)  $6 - 2 = 4$
- 2)  $3 + 1 = 4$
- 3)  $4 + 3 = 7$
- 4)  $4 \times 2 = 8$
- 5)  $6 \times 3 = 18$

4  
+3 7  
+7 14  
+8 22  
+18

**40** Total Points

Chooses free





# DOUBLE DARE YOU

2  
Double Dicers  
to Play



## WHAT YOU'LL NEED

Each Double Dicer needs five Regular Double Dice, paper, pencil.

## THE GOAL

To be the first player to reach an accumulated total of 250 points.

## LET'S ROLL

We love doubles, so if you roll any on your turn, you're doubly lucky!  
Doubles are 1 + 1, 2 + 2, 3 + 3, 4 + 4, 5 + 5, and 6 + 6.

When it's your turn, roll all five Regular Double Dice. Look for any rolls that:

1. have a sum greater than or equal to 7.
2. are doubles.

**SCORING** - any sums greater than or equal to 7 are added at face value for points.  
Any doubles rolled, score for double points.

## EXAMPLE: PLAYER ONE

$5 + 3 = 8$  counts     $5 + 1 = 6$  doesn't count     $6 + 5 = 11$  counts  
 $6 + 6 = 12$  double counts for double: = 24     $5 + 3 = 8$  counts  
Score for the round:  $8 + 11 + 24 + 8 = 51$  points

On each turn, players can have one more chance to reroll any non-counting dice to see if they can now roll a sum greater than or equal to 7, or a double.



If you don't roll a "counter" you lose all your points from that round.

## EXAMPLE CONTINUED

Player chooses to reroll the  $5 + 1 = 6$  die. Rolls  $5 + 2 = 7$  counts  
Score for Player One's round is now  $51 + 7 = 58$  points.



## EXAMPLE: PLAYER TWO

$5 + 2 = 7$  counts     $5 + 3 = 8$  counts     $5 + 2 = 7$  counts     $4 + 1 = 5$  doesn't count     $6 + 3 = 9$  counts.  
Score for the round = 31

Player chooses to reroll  $4 + 1 = 5$ , and consequently rolls  $4 + 2 = 6$  doesn't count and loses all points for that round.

**SCORE** - after the first round, Player One leads "58" to Player Two "0".

A player may choose to reroll any number of non-counting dice after their first roll. As long as at least one die in the reroll counts, then their accumulated points for the round are safe ie. protected. A player may have a maximum of two rolls per turn.

Players continue to alternate turns.  
The first player to reach  
250 points is the winner.



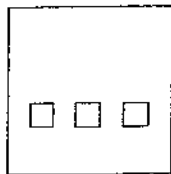


# BETWEENERS

USING THREE IN A CUBE DICE

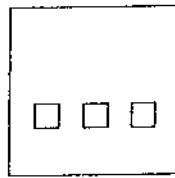
READ AND CHUNK PLACE VALUE

ROLL 1

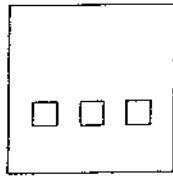


Hundreds  
Tens  
Ones

ROLL 2

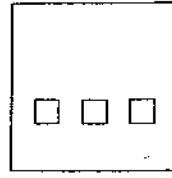


Hundred Thousands  
Ten Thousands  
Thousands

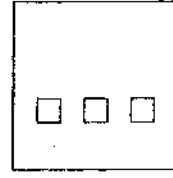


Hundreds  
Tens  
Ones

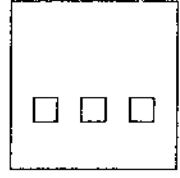
ROLL 3



Hundred Millions  
Ten Millions  
Millions



Hundred Thousands  
Ten Thousands  
Thousands



Hundreds  
Tens  
Ones

WARM UP:

ROLL THREE IN A CUBE TO BUILD THE GREATEST NUMBER POSSIBLE

ROLL THREE IN A CUBE TO BUILD THE LEAST NUMBER POSSIBLE

ASSIGN RED/WHITE/BLUE AS HUNDREDS/TENS/ONES (UNITS)

TO PLAY

ROLL AND HIDE CUBE

BUILD THE BEST "BETWEEN" NUMBER. WRITE NUMBER DOWN

COMPARE AND SCORE. BETWEEN NUMBER WINS 1 POINT

EXAMPLE

246
351
556

# BETWEENERS



























