

box cars and one-eyed jacks[®]

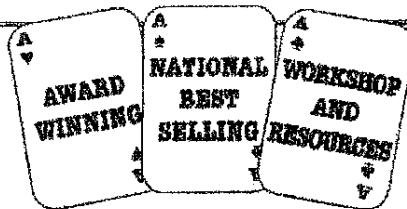
boxcarsandoneeyedjacks.com

Presents

All Hands On Deck



Presented by
Jane Felling



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Phone (780) 440-MATH

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

Multiplication Board

	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

Blank - Addition Tic Tac Toe

	0	1	2	3	4	5	6	7	8	9
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										

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.

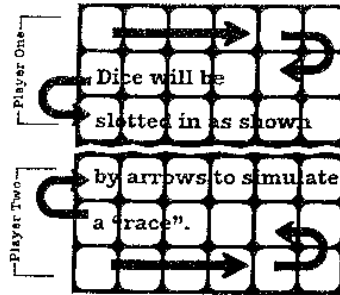
TO BEGIN

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

THE GOAL

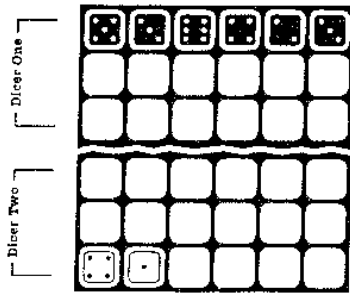
The goal of the game is to have the most dice in your side of the "horse race track" after all dice have been rolled out for the round. Dicers roll two dice at one time.

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 + = 5 → Tosses dice into lid

Toss 2

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

Dicer Two + = 3 → Tosses dice into lid

Toss 3

Dicer One + = 6 → TIE both players place dice in tray

Dicer Two + = 5

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".

$$\begin{matrix} 6 & 6 & 6 \\ \square & \square & \square \end{matrix} + \begin{matrix} 6 & 6 & 6 \\ \square & \square & \square \end{matrix} + \begin{matrix} 6 & 6 & 6 \\ \square & \square & \square \end{matrix} = 9$$

LEVEL 3

Play as described in above rules, but now Dicers roll two dice and multiply $\begin{matrix} 6 & 6 \\ \square & \square \end{matrix} \times \begin{matrix} 6 & 6 \\ \square & \square \end{matrix} = 20$ 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?

GOOD LUCK!





TICK TOCK ROLL A CLOCK

2
Double Dicers
to Play

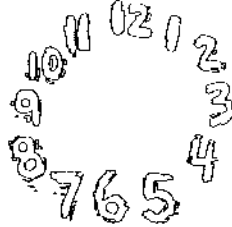


WHAT YOU'LL NEED

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

TO BEGIN

Each player needs to draw a clock as follows:

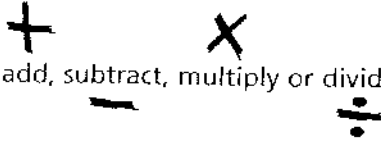


THE GOAL

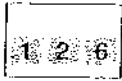
To be the first Double Dicer to circle all numbers on their clock.

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:

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

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.



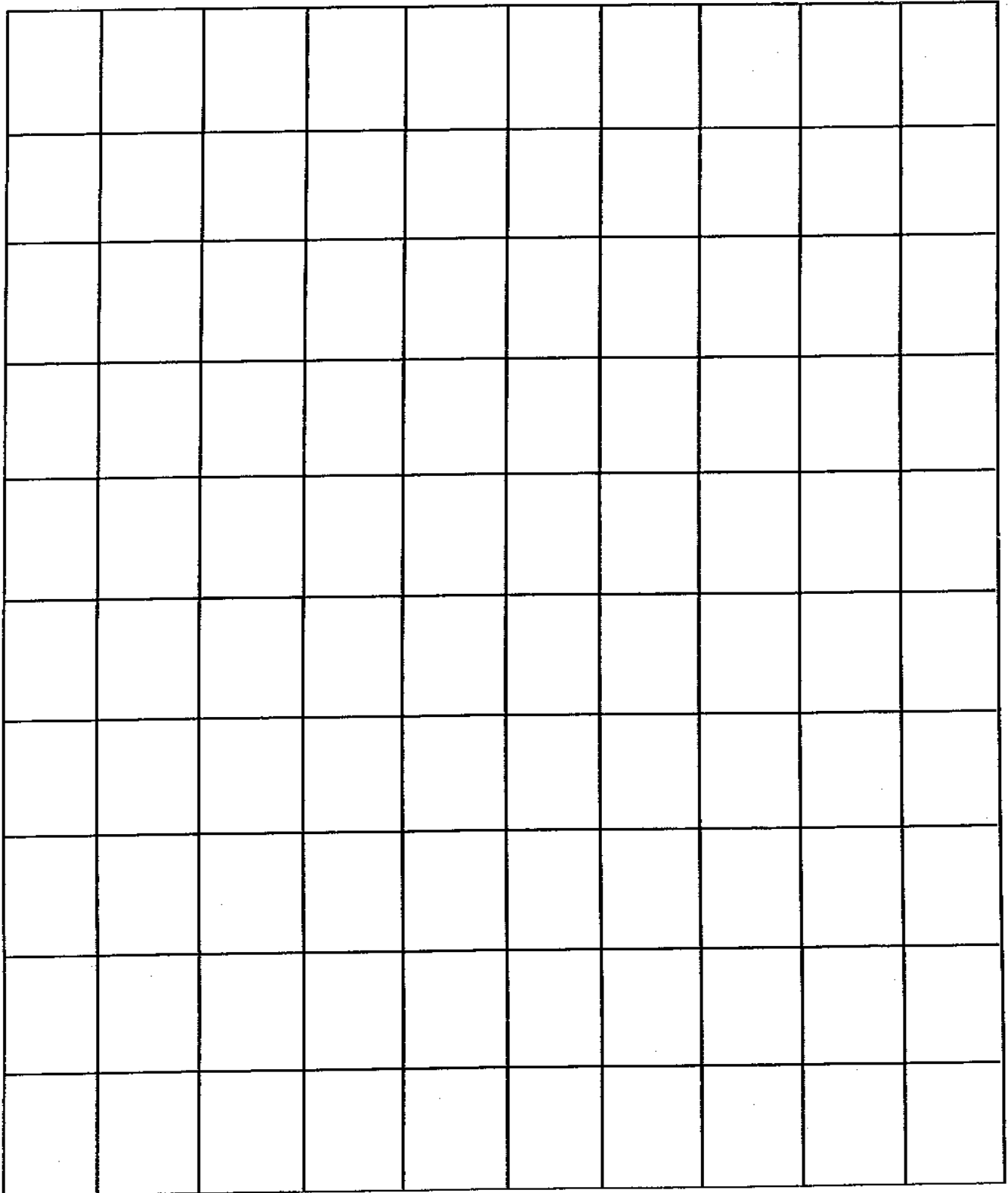
Do you think there are certain numbers that will be more difficult to circle?



Play & Discover!



Blank Hundred Board / Ten For Me



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 (i.e., 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"

Grade 4 and up

LEVEL:

mixed operations, problem solving

SKILLS:

1 (solitaire) or whole class in cooperative teams

PLAYERS:

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.

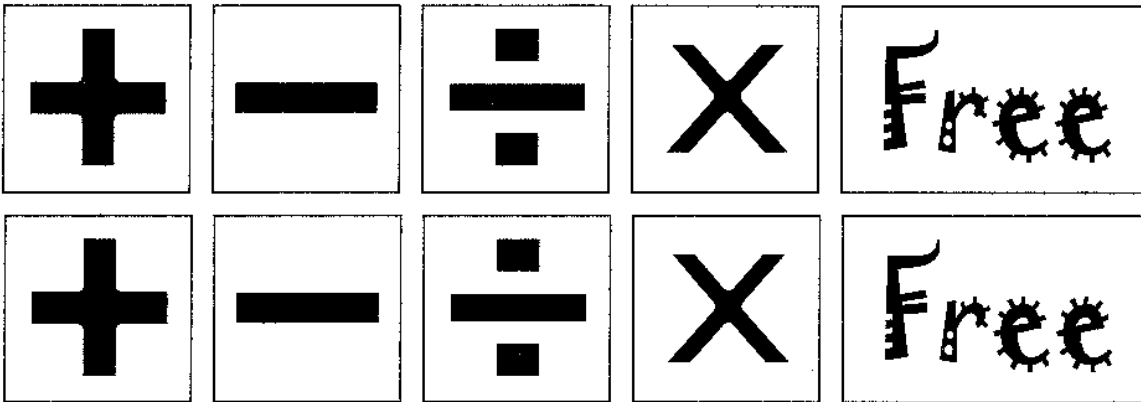
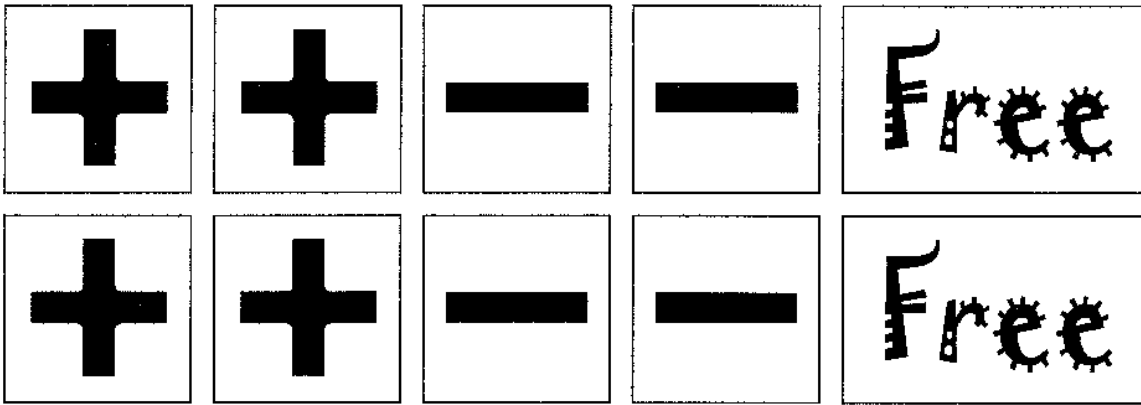
The goal of the game is for each team to remove all the cards from their grid. All cards remaining at the end of a round equal their face value score AGAINST the team, (i.e. 4 and 3 left - score against = 7). The lowest and best possible score per round is zero.

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

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

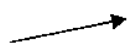
ACCUMULATED POINTS

- 1) $6 - 2 = 4$
- 2) $3 + 1 = 3$
- 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



FOOTBALL FACTOR

Player One

	Touchdown	Field Goal	Total
1st Quarter			
2nd Quarter			
3rd Quarter			
4th Quarter			
Total Football Score			

Player Two

	Touchdown	Field Goal	Total
1st Quarter			
2nd Quarter			
3rd Quarter			
4th Quarter			
Total Football Score			

Player One

	Touchdown	Field Goal	Total
1st Quarter			
2nd Quarter			
3rd Quarter			
4th Quarter			
Total Football Score			

Player Two

	Touchdown	Field Goal	Total
1st Quarter			
2nd Quarter			
3rd Quarter			
4th Quarter			
Total Football Score			

MULTIPLICATION SCRAMBLE

0 - 9	_____	0 - 9	_____
10 - 19	_____	10 - 19	_____
20 - 29	_____	20 - 29	_____
30 - 39	_____	30 - 39	_____
40 - 49	_____	40 - 49	_____
50 - 59	_____	50 - 59	_____
60 - 69	_____	60 - 69	_____
70 - 79	_____	70 - 79	_____
80 - 89	_____	80 - 89	_____
90 - 99	_____	90 - 99	_____
100 - 109	_____	100 - 109	_____
110 - 119	_____	110 - 119	_____
120 - 129	_____	120 - 129	_____
130 - 139	_____	130 - 139	_____
140 - 149	_____	140 - 149	_____

THE BIG ROUND UP

10 20 30 40 50 60 70 80 90 100 110 120 130 140

10 20 30 40 50 60 70 80 90 100 110 120 130 140

TANGLE WITH TWENTY

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
X X X

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
X X X

Game # _____

Skills: _____

Players: _____

Equipment: _____

Rules:

Implementation Plan

List 3 ways you can incorporate the Box Cars strategies into your classroom, program or school.

1.

2.

3.

Identify the game/activity that you will try first, when you get back later this week.

Find a colleague in this room whom you will contact at the end of the week. The two of you will be agreeing to hold a conversation regarding what you did to start implementing what you learned today.

Who:

From:

Phone:

Email:

You can reach me at:

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