Corn Shucks

Building Fluency: compare decimals to thousands

Materials: recording sheet, digit cards (or 0-9 die)

Number of Players: 2-4

Directions:



- 2. The player writes that number on line 1.
- 3. The second player selects 6 digit cards and makes the smallest possible number for those digits.
- 4. The player writes that number on line 10.
- 5. The next player selects 6 digit cards and must make a number that falls between the other two. They can choose any line to place that number on.
- 6. The next player selects 6 digit cards and makes a number using those digits that could be placed on an empty line between any two existing numbers.
- 7. Game continues until a number is correctly placed on each line. (All 10 lines contain a number and they are in the correct order), OR players cannot place a number correctly on any of the empty lines.

Variation/Extension: Once students understand the game they can create their own recording sheet in their math notebook. Teacher can modify this game by changing the number of digits or number of lines.

1	



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

Race to a Meter: A Decimal Game

Building Fluency: read, write and compare decimals to a thousand

Materials: meter stick, base-10 blocks (40 small cubes and 25 longs), recording sheet, and playing cards

Number of Players: 2

Directions:

- 1. Players play on opposite sides of the meter stick.
- 2. Players begin at zero, and place the appropriate number of rods or cubes along the edge of the meter stick according to the number selected from the pile of cards.
- 3. When a player has 10 or more cubes, they should trade them for a ten-cm rod.
- 4. After each round, each player should record the move on the recording sheet.
- 5. The winner is the player to reach the end of the meter stick. Player does not have to land exactly on one meter, but may finish beyond the end of the meter stick.

Variation/Extension: Student may use decimal or fraction dice. Students may also create additional cards and extend the length of the meter stick to two meters. Students may also start at the end of the meter stick and subtract the number selected – first player to get to 0 wins.



PLAYER 1

NUMBER ON CARD	TOTAL SCORE To this point

NUMBER ON CARD	TOTAL SCORE To this point

<u>1</u> 10	<u>5</u> 100	<u>10</u> 100	<u>5</u> 10
<u>10</u> 10	<u>2</u> 10	<u>50</u> 100	<u>2</u> 100
<u>8</u> 10	<u>8</u> 100	.1	.2
.5	.50	.25	.05
.01	.04	.6	.8

Sum with Decimals

Building Fluency: read, write and compare decimals, add decimals to the hundredth place and use concrete models to represent decimals.

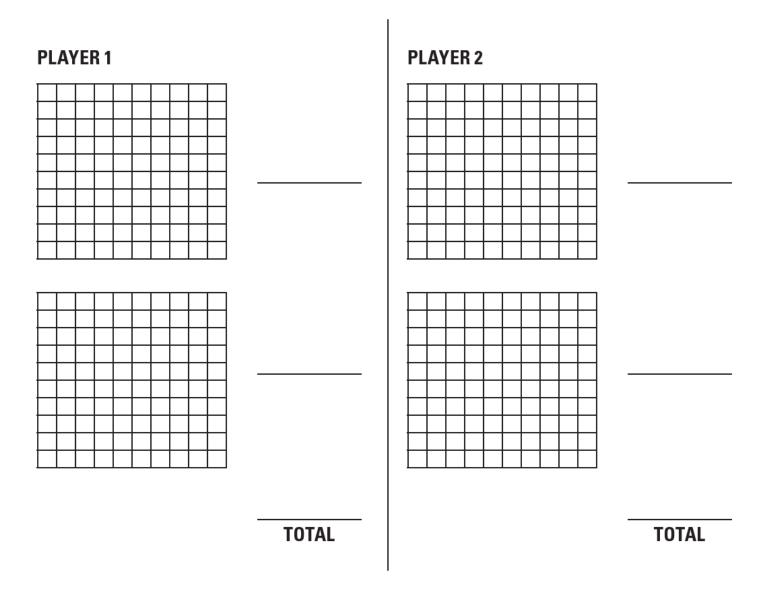
Materials: Pair of dice and recording sheet

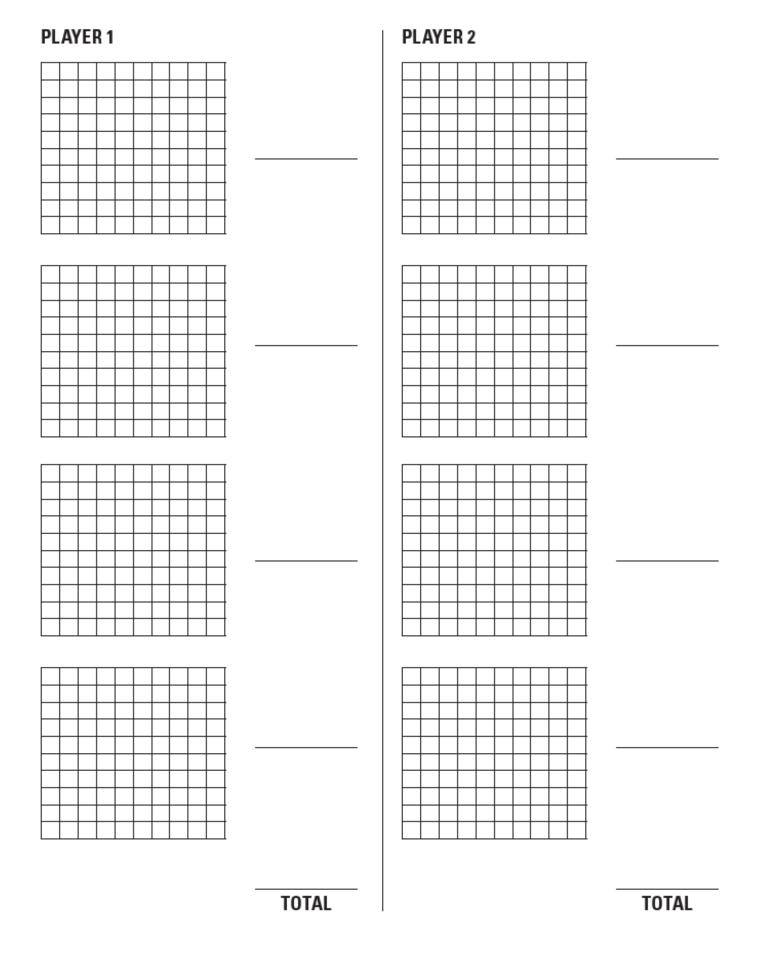
Number of Players: 2

Directions:

- 1. Roll 2 dice and used the numbers rolled to create a decimal to the hundredths place. Example, if you roll a 3 and a 4, you would form the decimal .34 or .43, go to the first grid (on recording sheet) and shade in that fraction of the grid.
- 2. Roll again and shade in the decimal created on the second grid.
- 3. Add both boards, highest total decimal wins.

Variation/Extension: Students could compare each decimal represented on the grid. Teacher can reduce or increased the number of grids. An additional recording sheet has been added for adding 4 decimals for your convenience, if you choose to use it. Teacher may modify by adding decimals together on one grid using different color pencils to represent the different decimals.





Sum with Decimals – Part II

Building Fluency: read, write and compare decimals, add decimals to the thousandths place and use concrete models to represent decimals.

Materials: 3 dice and recording sheet

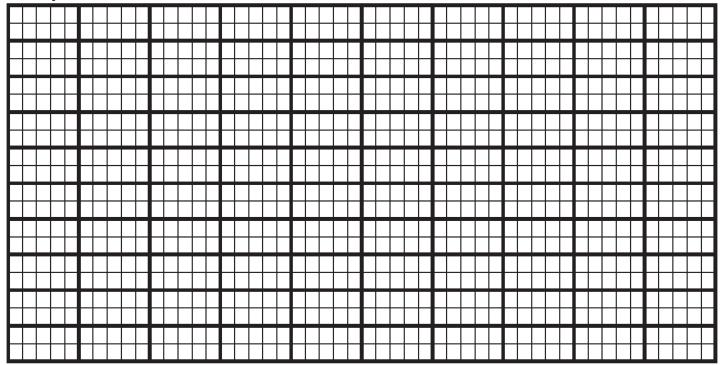
Number of Players: 2

Directions:

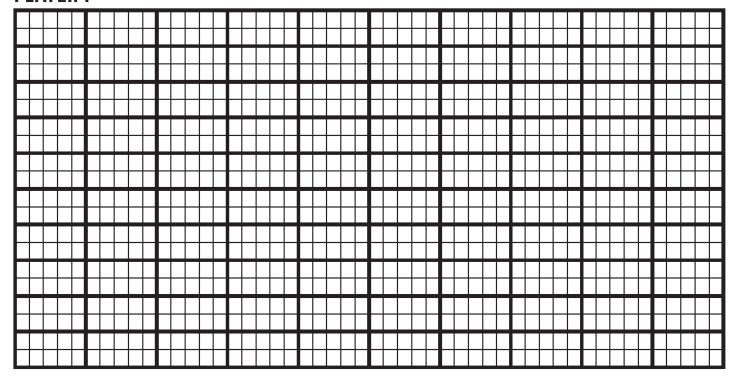
- 1. Roll 3 dice and make a three digit decimal to the thousandths place. For example, if you roll a 4, 3 and a 4, you would form the decimal .434, go to the first grid (on grid sheet) and shade in that fraction of the grid.
- 2. Roll again and shade in the decimal created on the second grid.
- 3. Add both boards, highest decimal wins.

Variation/Extension: Students could compare each decimal represented on the grid. Teacher may reduce or increased the number of grids. Teacher may modify this game by adding decimals together on one grid using different color pencils to represent the different decimals.

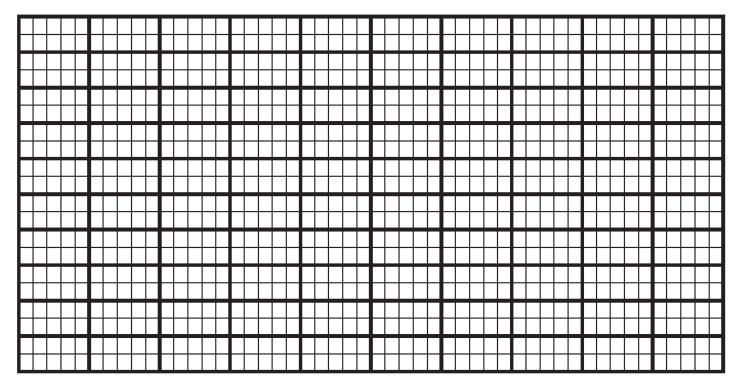
Example Grid





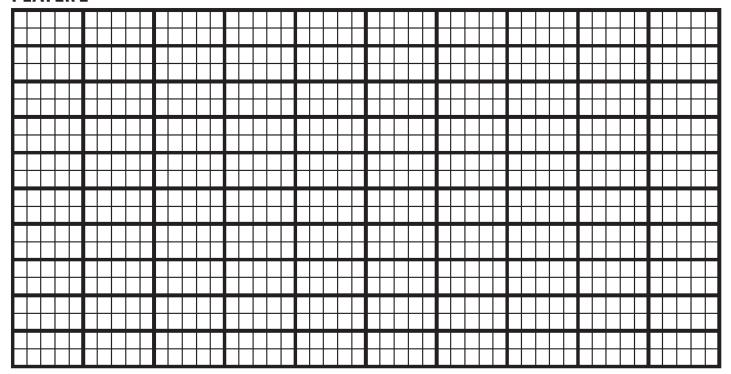


Decimal 1: _____

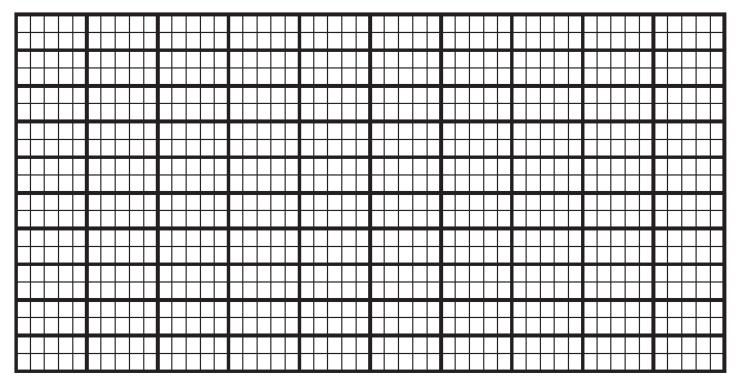


Decimal 2: _____

_____ + ____ =



Decimal 1: _____



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	+		=	
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Pieces of Eight

Building Fluency: coordinates and compare decimals

Materials: pair of dice, gameboard, paper

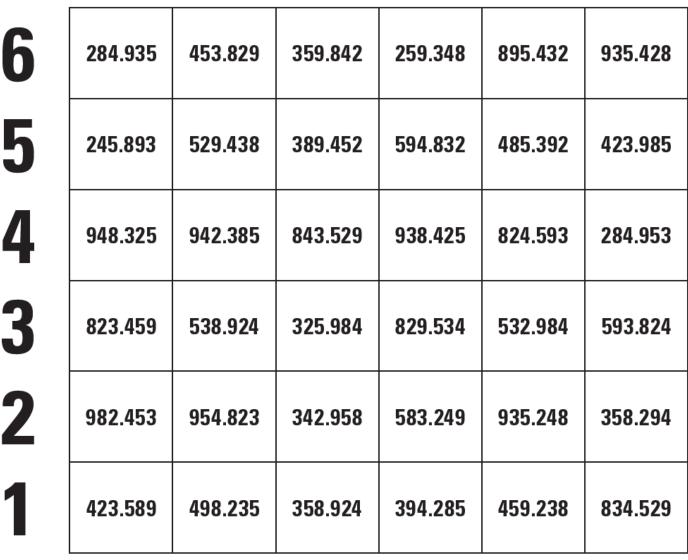
Number of Players: 2-4

Directions:

- 1. Each player rolls dice and chooses coordinate on the grid.

 Example: if the player rolls a 1 and 3, the player may choose, (1, 3) or (3, 1).
- 2. After each player is on a coordinate, they compare numbers.
- 3. The player with the 8 in the place with the largest value wins the round. In case of a tie the player with the largest number wins.
- 4. Play 10 rounds.
- 5. The player who wins the most rounds wins the game.

Variation/Extension: Students can record the value of the eight and total the 10 rounds, student with the highest sum wins or lowest sum wins.



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1 2 3 4 5 6

Race to 10 or Bust

Building Fluency: efficient mental strategies when adding and subtracting decimals. Students may begin to see that strategies that work well with whole numbers, work equally well with decimal, for example, 3.8 + 0.6 is the same as 3.8 + 0.2 + 0.4.

Materials: die and recording sheet

Number of Players: 2

Directions:

- 1. The player rolls the number cube and calls out the number.
- 2. Each player individually chooses whether to use the number as ones or as tenths. Once a decision has been made, it cannot be changed.
 - Example: The roller rolls 5. Player 1 may record it as 5 ones (5) or as 5 tenths (0.5).
- 3. The players record their choice in the appropriate column and keeps a cumulative total in the 'Total' column on their recording sheet.
- 4. Play continues in this way for eight rounds.
- 5. The player who scores 10 or is closet to (but not beyond) 10 is the winner.

Variation/Extension: Students could change the total number – 100 or use a dice (0-9). Number of rounds could also be changed – more or less. Once students understand how this game works they can create their own table in their math notebook instead of using recording sheet. Additional recording sheets have been included for your convenience.

PLAYER 1

ONES	TENTHS	TOTAL

ONES	TENTHS	TOTAL

ONES	TENTHS	TOTAL

ONES	TENTHS	TOTAL

ONES	TENTHS	TOTAL

ONES	TENTHS	TOTAL

ONES	TENTHS	TOTAL

ONES	TENTHS	TOTAL

Race to 1 or Bust

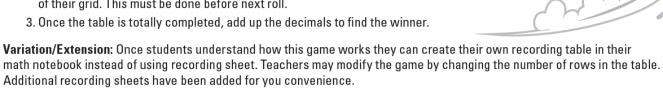
Building Fluency: add decimals

Materials: die and recording sheet

Number of Players: 2

Directions:

- 1. Each player takes their turn rolling the die.
- 2. After the roll, every player places the digit rolled in any box of their grid. This must be done before next roll.



PLAYER 1

TENTHS	HUNDREDTHS
TOTAL:	TOTAL:

TENTHS	HUNDREDTHS
TOTAL:	TOTAL:

TENTHS	HUNDREDTHS
TOTAL:	TOTAL:

TENTHS	HUNDREDTHS
TOTAL:	TOTAL:

TENTHS	HUNDREDTHS
TOTAL:	TOTAL:

TENTHS	HUNDREDTHS
TOTAL:	TOTAL:

TENTHS	HUNDREDTHS
TOTAL:	TOTAL:

TENTHS	HUNDREDTHS
TOTAL:	TOTAL:

TENTHS	HUNDREDTHS
TOTAL:	TOTAL:

TENTHS	HUNDREDTHS
TOTAL:	TOTAL:

TENTHS	HUNDREDTHS
TOTAL:	TOTAL:

TENTHS	HUNDREDTHS
TOTAL:	TOTAL:

Shopping Spree

Building Fluency: adding and subtracting decimals

Materials: timer, recording sheet and price tag sheet

Number of Players: 2

Directions: Karla likes to watch a game show called "Shopping Spree". On the show, each of two contestants is given a certain amount of money to spend. Then each contestant has 30 seconds to choose from a list of prizes whose costs are given. The winner is the contestant who comes closest to the amount of money they are given to spend without going over. Play the game "Shopping Spree" with a classmate using the list of prizes and costs on the next page.

- 1. Decide who will be Contestant 1 and who will be Contestant 2.
- 2. As Contestant 1 chooses price tags, Contestant 2 records the choices. Example: Scooter \$5,535.89
- 3. Then switch places and let Contestant 2 choose while Contestant 1 records.
- 4. After both contestants have chosen their price tags, add the costs and determine who came the closest without going over.
- 5. Remember, you have 30 seconds to make your choices.

Variation/Extension: Change the amounts for the two contestants. Do you think the game could be unfair depending upon the amounts for the contestants to spend? Explain your thinking. Use the sales catalogs and create your own Shopping Spree.

CONTESTANT 1: \$16,789.50	CONTESTANT 2: \$20,005.99

