Math Centers Teacher Packet Third Grade

Time Flies

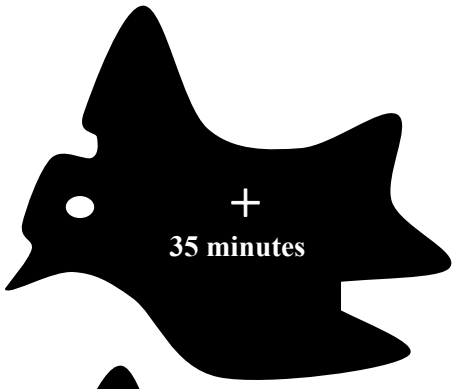
- Each player selects a different color marker, places it on any bird on the game board, and records 12 Noon in the beginning time column for round one on their record sheet.
- Each player in turn rolls the number cube and moves around the board that number of spaces.
- The player records + or − , and the amount of change on their record sheet. The player then adds or subtracts that amount of time to the beginning time for that round.
- Put the new time in the last column on the record sheet and in the beginning time column of the next round.
- The winner is the player with the latest time at the end of ten turns.

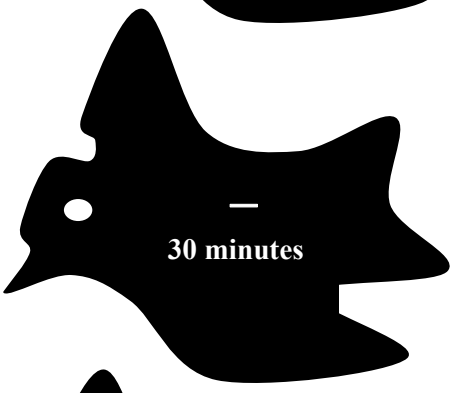
Time Flies Record Sheet

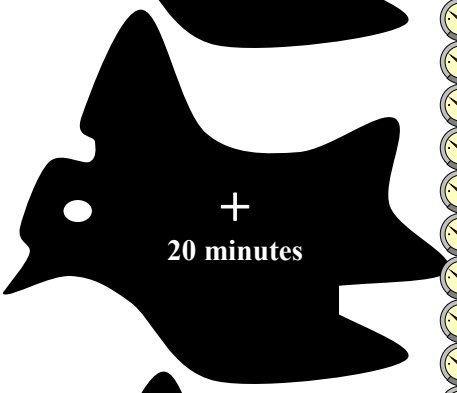
Name _____

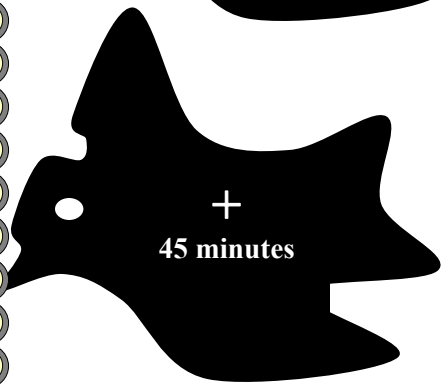
Round	Beginning Time	+ or −	Amount of Change	New Time
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

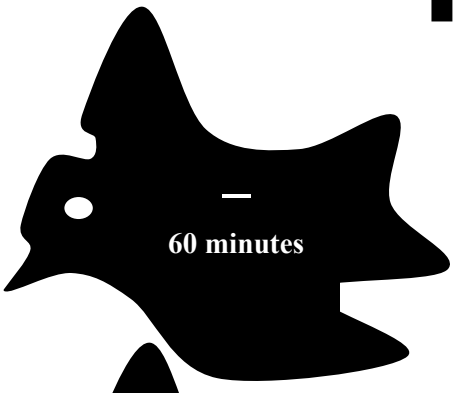
Time Flies When You're Having Fun

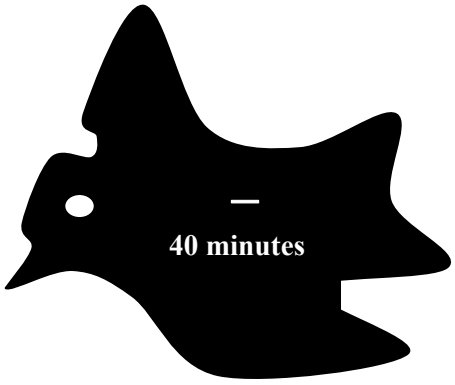


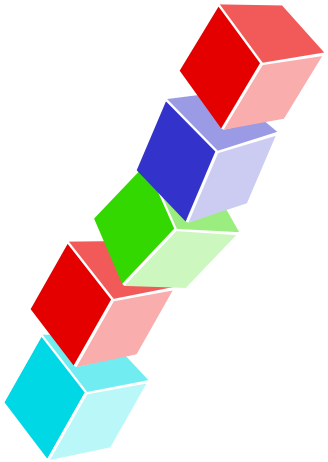




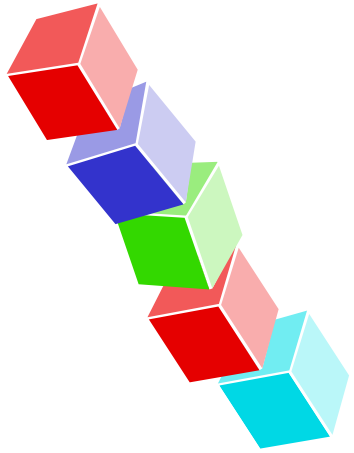








Blue Cube, Blue Cube



Select one cube from the first bag. Record the color on your Tally Chart, replace the cube, and repeat for ten draws. Follow this same procedure for the other two bags. After you have completed the Tally Sheet, make your prediction on the Prediction Chart, and answer the question.

Finally, look in the bags, record the colors of the cubes in each bag by coloring them on the bags on your record sheet. Then answer the question.

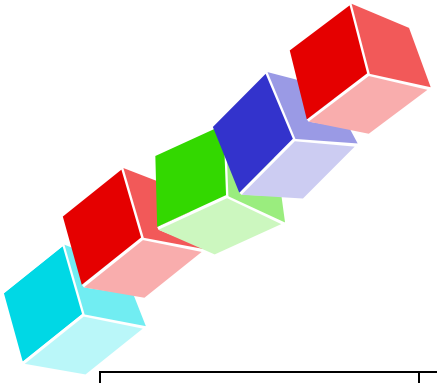
Blue Cube, Blue Cube

Teacher Instructions for setting up the center:

- Materials:
- ✓ Blue, red, and green colored pencils
- ✓ Three paper bags set up as follows:

1. One blue cube, three green cubes, and six red cubes
2. Two blue cubes, seven green cubes, and one red cube
3. Seven blue cubes, three green cubes, and no red cubes

- Students conduct an experiment by selecting a cube from Bag One, placing a tally mark on the record sheet, replacing the cube, and repeating the process 10 times.
- Repeat this experiment for Bag Two and Three.
- Students use the results of their experiments to predict the number of each color cube in each of the bags. (There are a total of 10 cubes in each bag.)
- Students then select the bag they would draw from if they wanted to select a blue cube.
- Students then look in the bags and use the colored pencils to draw the cubes that are in each bag on their record sheet.
- Students determine from which bag they have the best chance of drawing a blue cube and explain their thinking.



Blue Cube, Blue Cube
Record Sheet

Tally Chart

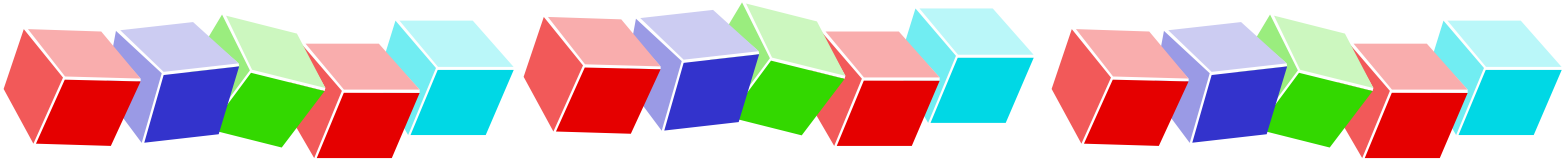
Bag Number	Red	Blue	Green
1			
2			
3			

There are ten cubes in each bag. Based on the results on your tally sheet, predict how many of each color is in each bag. Put your prediction in the chart below.

Prediction Chart
Number of Cubes in Each Bag

Bag Number	Red	Blue	Green	Total
1				10
2				10
3				10

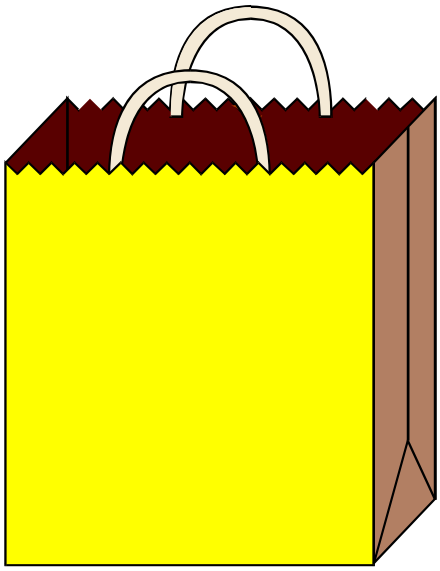
Based on this prediction which bag would you draw from if you wanted to get a blue cube? Explain your answer.



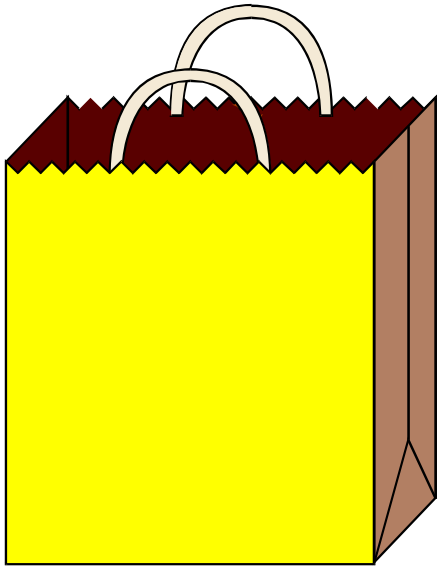
Blue Cube, Blue Cube
Record Sheet

Name _____

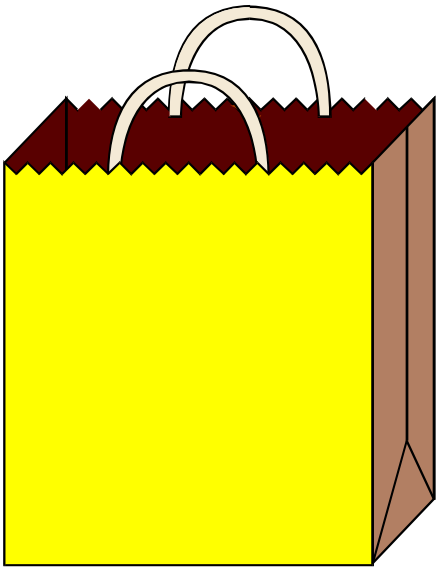
Look at the cubes in each bag. On the front of the bags below draw a picture of the cubes in each bag.



Bag 1

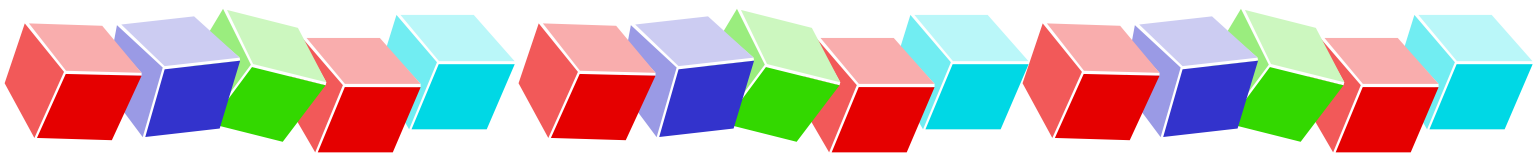


Bag 2



Bag 3

At the carnival you can win a prize for drawing a blue cube. From which bag should you draw to have the best chance of winning? Explain your answer using information from all three bags.



Hide and Seek

Coordinate Grid

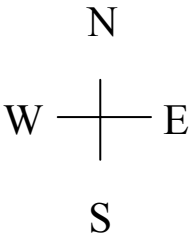
- On their coordinate grid, each player hides the three shapes ( ,  , ). Once the shapes are placed, they cannot be moved.
- Players should not let their opponent see where the shapes are hidden.
- Each player writes the coordinates of the shapes on their record sheet.

  (The first number is the number across the bottom of the grid, the x axis. The second number represents the number along the left side of the grid, the y axis.)
- After the players have their shapes hidden, player one guesses one of the coordinate points on his/her opponent's board.
- If the opponent has a shape hidden there, she/he says "hit" and tells what shape has been found.
- If the opponent does not have a shape hidden there she/he tells the direction of their closest hidden shape. For example if I say (3,5) and it is a "Miss", and my opponent's closest shape is at (5,4), my opponent would say, "East, South (E,S)".
- Play continues until one player finds all three shapes.

Hide and Seek
Record Sheet

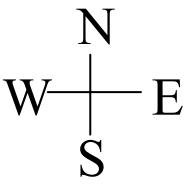
Name _____

My Hidden Shapes	My Guesses Miss	Moves	Hit
 (,)			
 (,)			
 (,)			

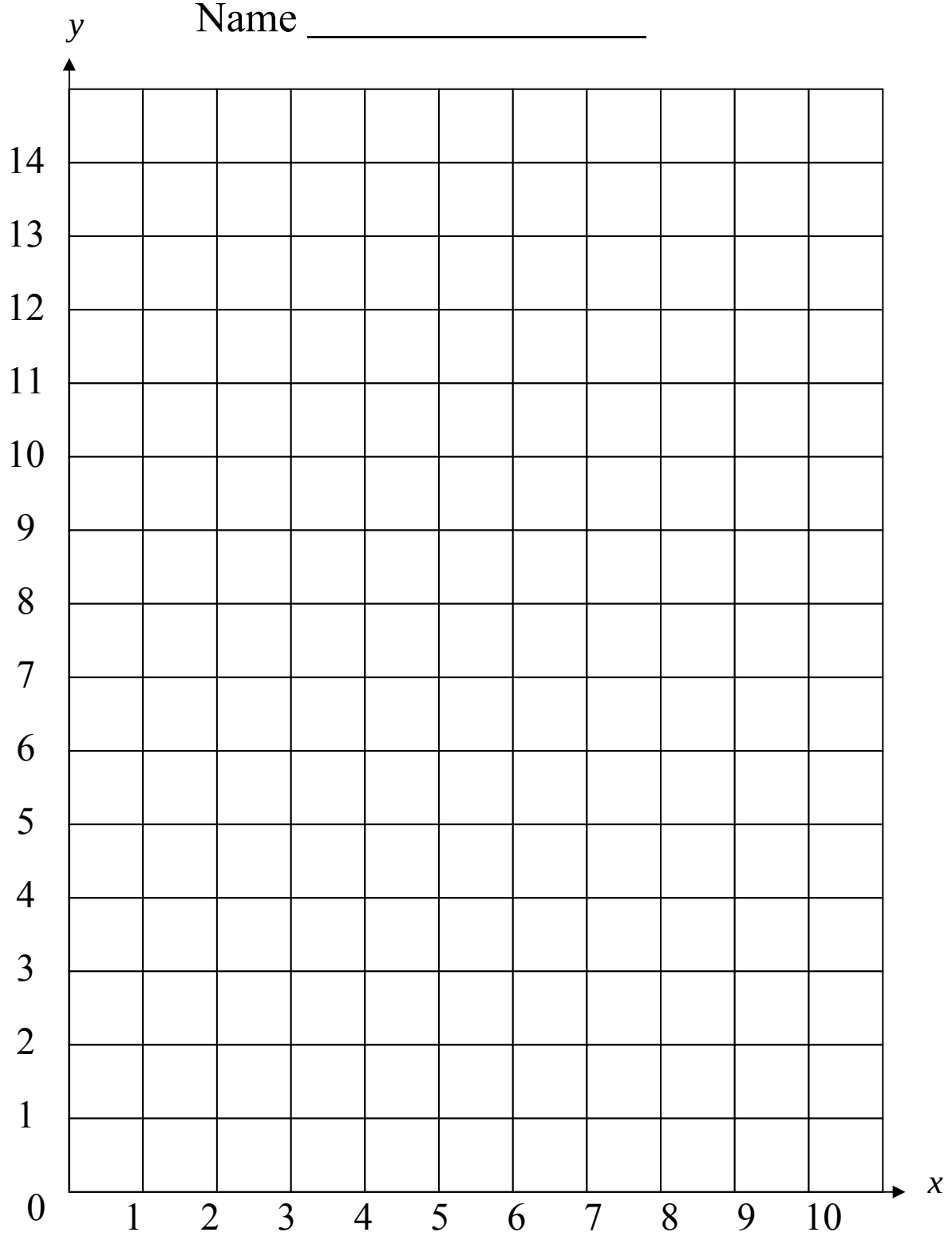


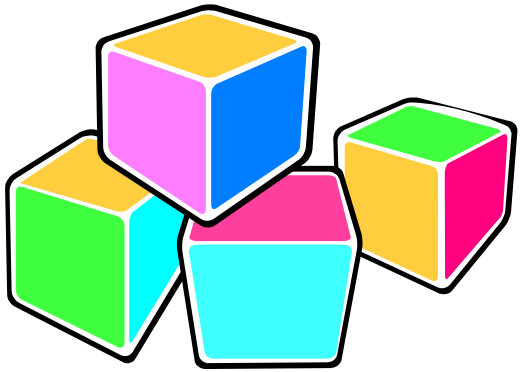
Hide and Seek

Game Board



Name _____



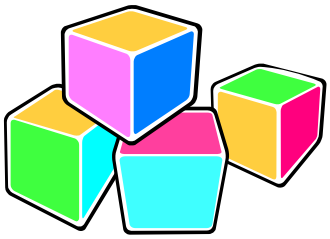


Build A Solid

Look at each net and write the name of the solid it will make in the first column of your record sheet.

Cut out one of each of the nets. Fold along the dotted lines and tape your edges together.

After you have all of your solid figures built, complete the table on your record sheet and answer the questions below the table.



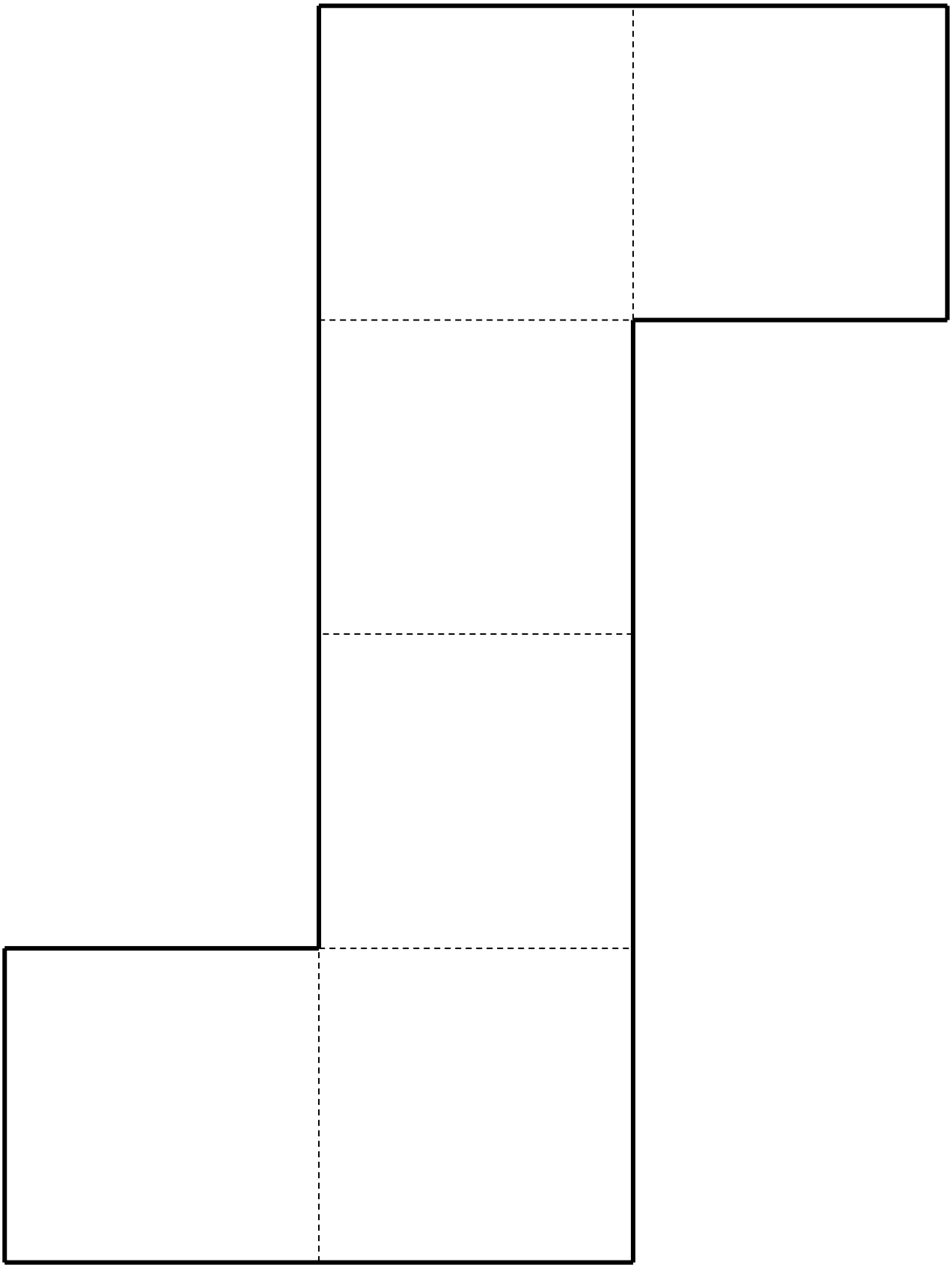
Build A Solid Record Sheet

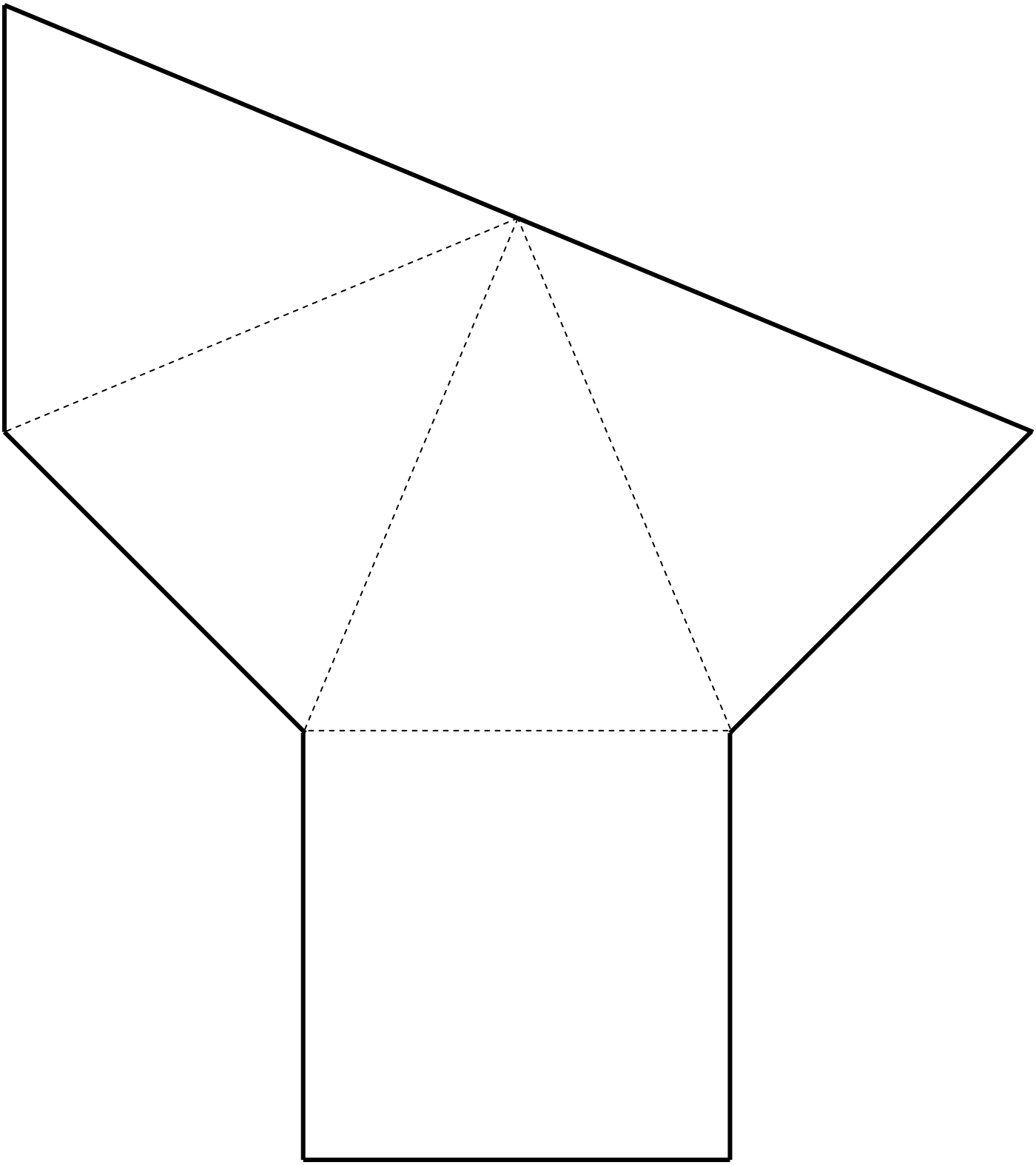
Name of Solid Shape	Number of Faces	Number of Edges	Number of Vertices

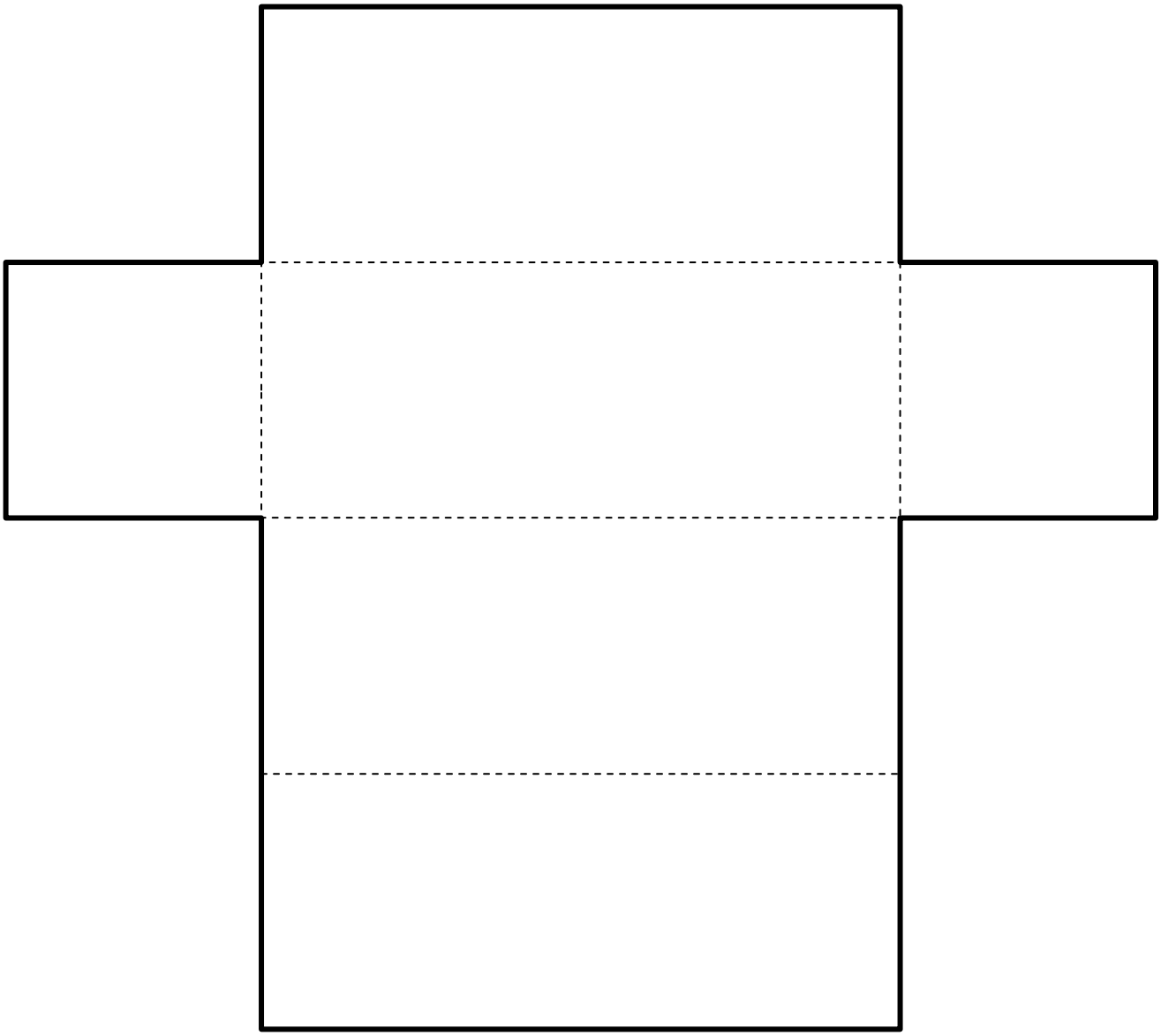
Draw the face from one of your solids that has 3 sides and 3 angles. Name the shape.

Draw the face that is on all three of the solids. Name the shape and tell how many sides and angles it has.

Draw the face that is different from the other two faces you have drawn. Name the shape and tell how many sides and angles it has.

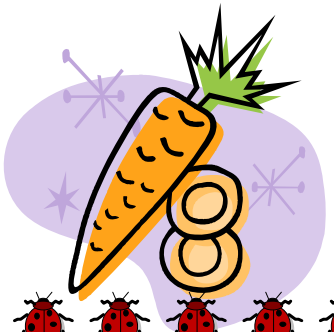






Plotting a Garden

Each of the four members in your group gets one whole sheet of vegetables. Cut out the vegetables. Each group member selects a different vegetable to be in the first row of their garden and shows all of the different garden arrangements with that vegetable in the first row (for example, one person shows all of the gardens with lettuce first, another shows all of the gardens with corn first and so on). Each person glues their different arrangements onto a 9” by 12” sheet of construction paper. All four group members then put their gardens together to show all of the possible garden arrangements for four different vegetables.



Plotting a Garden
Record Sheet

Name _____

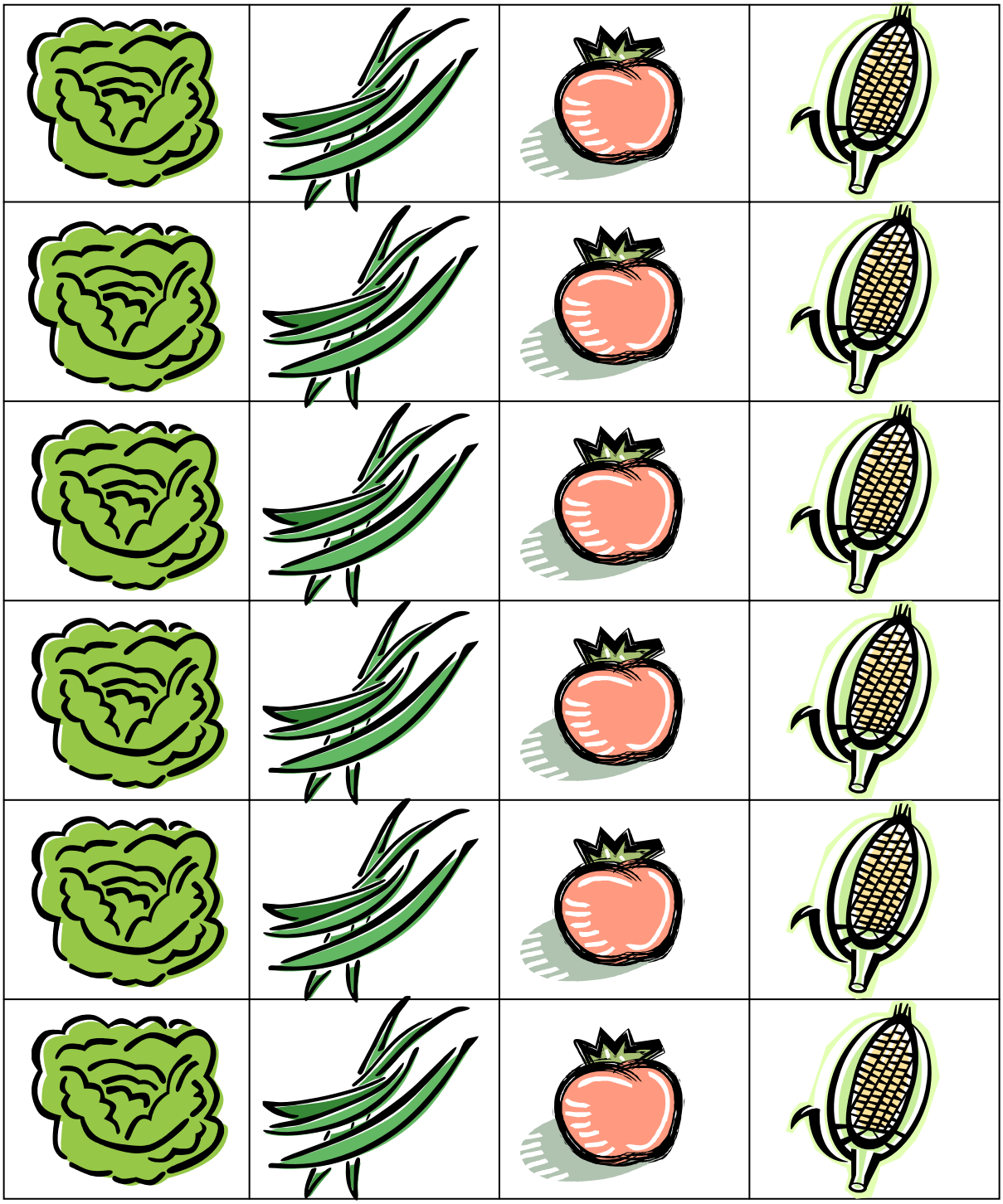
How many different garden arrangements did each group member get?

When you put all of the different arrangements from each group member together as a whole group how many different garden arrangements did the group get?

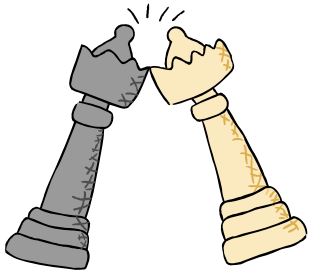
Do you notice a relationship between the number of different vegetables and the total number of arrangements?

If each of the vegetables needs 1 square foot of garden space, how many square feet of space would you need for all the possible arrangements with lettuce in the first row? What would the perimeter be? (You may use color tiles or grid paper to make the garden.)

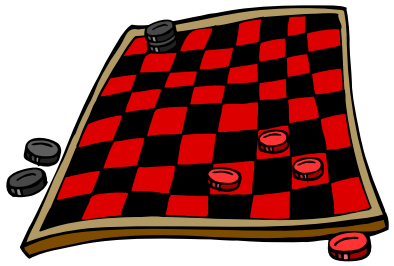
Plotting a Garden

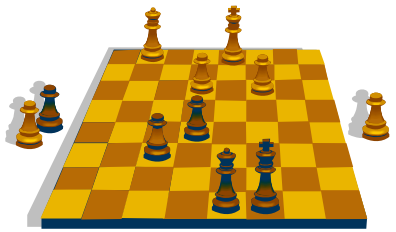


Buying Games



Mrs. Klingshirn's class needs to purchase new games for indoor recess. The principal gave them a budget of $100 for the games. The class decided that they want to get at least three different games. Your task is to find 4 different ways that the class could spend their money on games. They want to spend as much of their money as possible without going over the $100 (tax is included in the price listed on the Price List). Write receipts showing a list of games and the total cost. Then determine if they would have any money left over.





Indoor Recess Games
Receipt

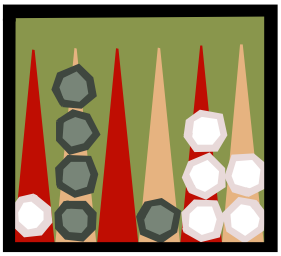
Name_____

Receipt #1	Receipt #2
Total_____ Money left_____	Total_____ Money left_____
Receipt #3	**Receipt #4**
Total_____ Money left_____	Total_____ Money left_____

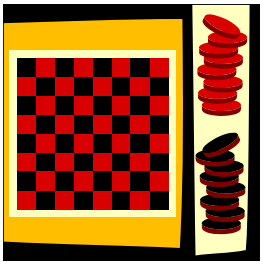
Indoor Recess Games
Price List

Chess
$6 each

Ring Toss
$12 each

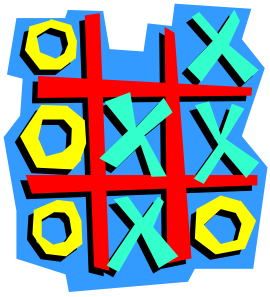


Backgammon
$10 each

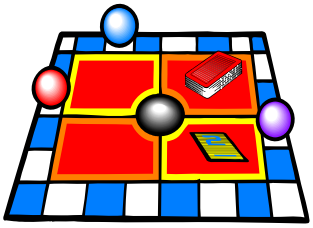


Checkers
$7 each

Yahtzee®
$14 each

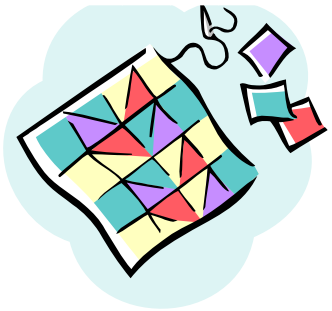


TicTacToe
$9 each



Parcheesi
$15 each

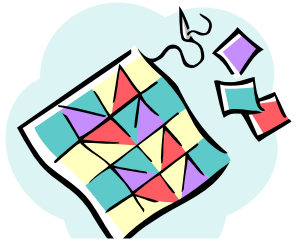
Chinese
Checkers
$22 each



Pattern Fraction Quilts

Use three different color tiles (red, yellow, blue) to create a design and cover the space in Quilt One. After you have your design completed, color the squares the same color as the tile you put on them. Complete the table on your record sheet. Then answer the questions about your first design, below the table.

Next, use exactly the same tiles to create a different design on Quilt Two. Take the tiles off of this quilt, color the square, complete the table, and answer the questions about the new quilt.



Name _____

Pattern Fraction Quilts

Question	Quilt One	Quilt Two
How many squares are in your design?		
What is the area of the quilt?		
What is the perimeter of the quilt?		
How many red tiles are on your quilt?		
What fraction of the quilt is red?		
How many blue tiles are on your quilt?		
What fraction of the quilt is blue?		
How many yellow tiles are on your quilt?		
What fraction of the quilt is yellow?		

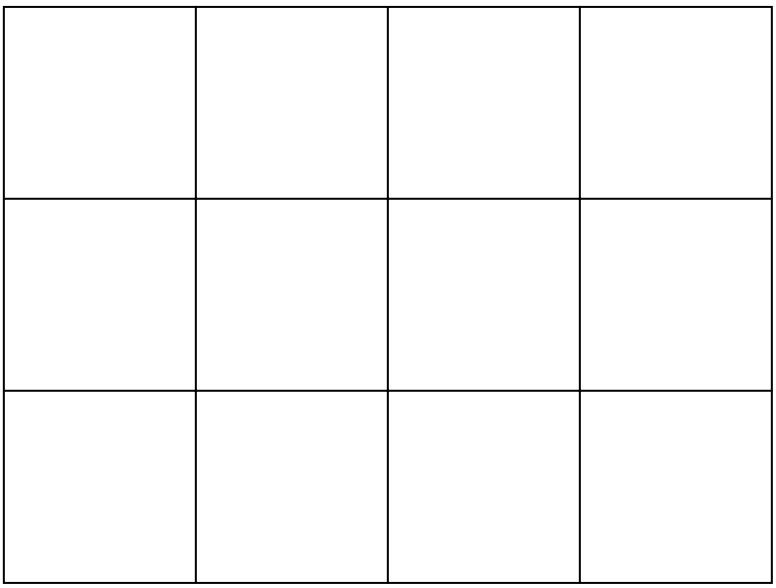
Write a number sentence that shows the fraction of Quilt One that is red and blue.

Order the three colors and their fractions from least to greatest.

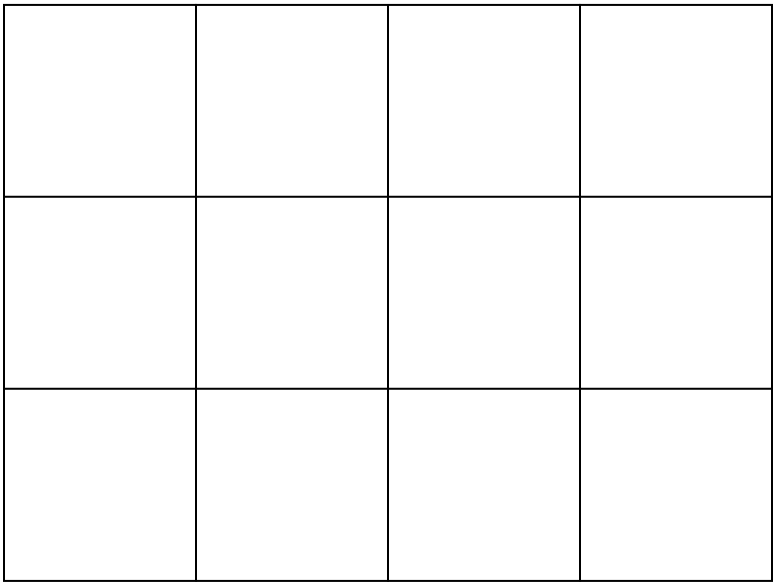
When you changed your design did the fraction of yellow tiles change? Why? Or Why not?

Name _____

Quilt One



Quilt Two



Money Fractions

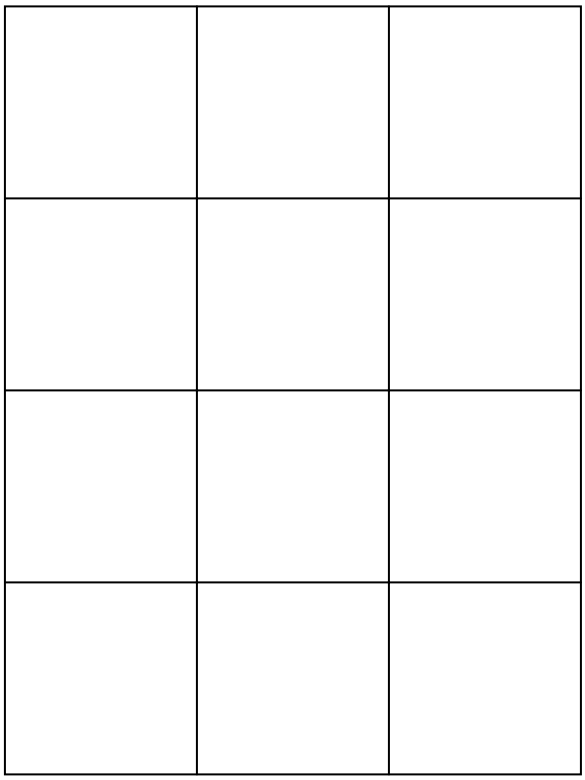
Board One

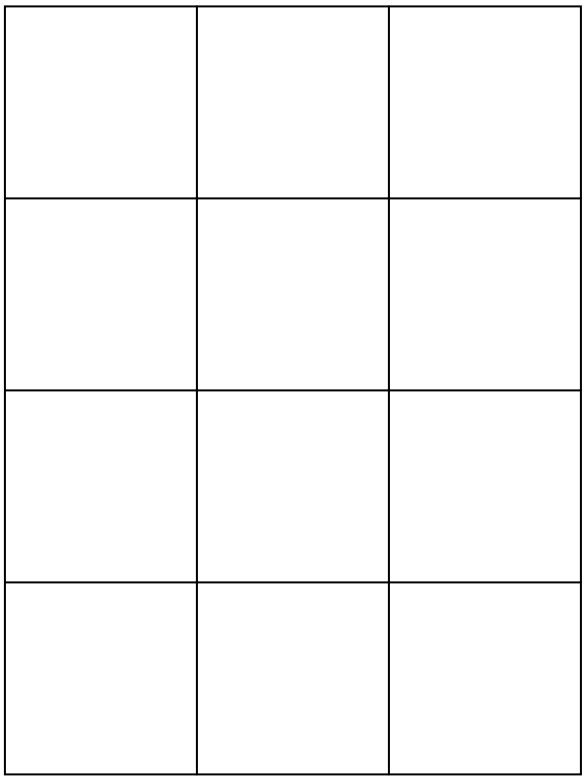
Use pennies, nickels, dimes, and quarters to fill each square on Board One. Complete the table for Board One and answer the questions about Board One on the record sheet.

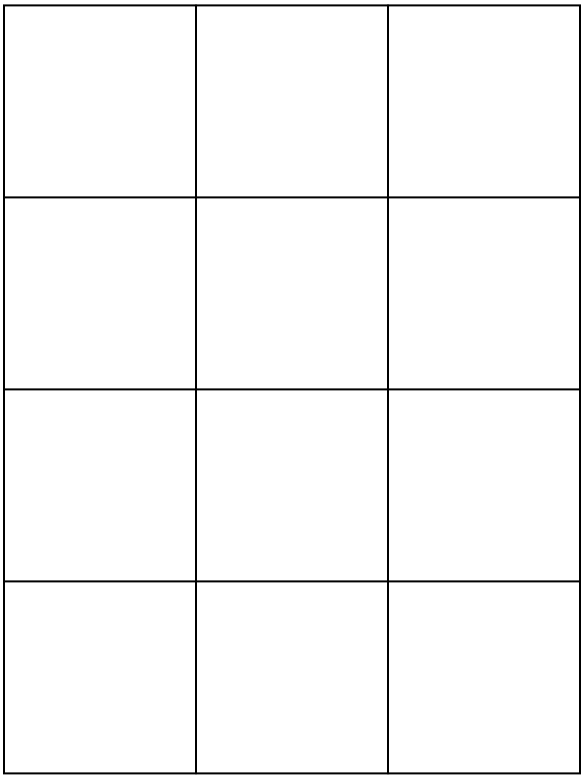
Board Two

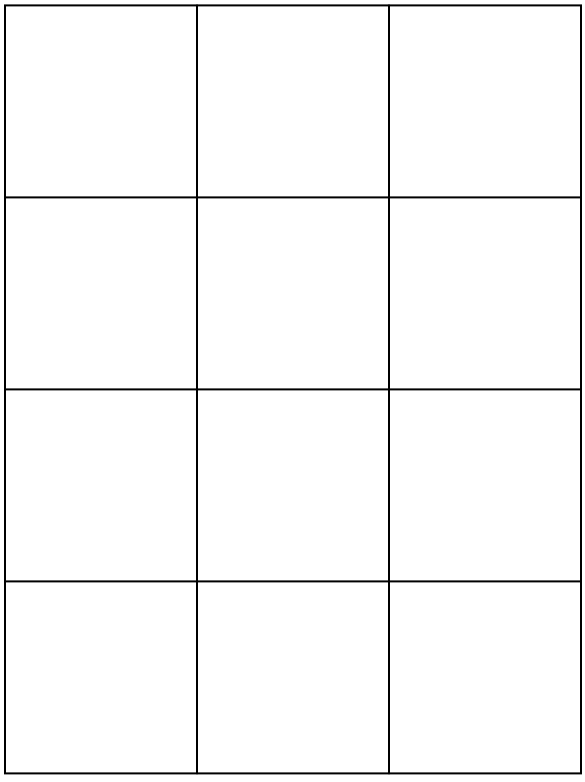
On Board Two place pennies in $\frac{1}{2}$ of the board, nickels in $\frac{1}{12}$ of the board, dimes in $\frac{2}{12}$ of the board, and quarters in $\frac{3}{12}$ of the board.

Money Fractions
Work Board









Name _____

Board One
Record Sheet

Coins	Fraction of Coins	Value of Coins
Pennies		
Nickels		
Dimes		
Quarters		

What is the total amount of money you put on your board?

If you put at least one of each coin on the board, what is the greatest amount of money you could put on the board?

If you put at least one of each coin on the board, what is the least amount of money you could put on the board?

Name _____

Board Two
Record Sheet

How much money did you put on the board?

How much more money do you have in quarters than you have in the rest of the coins?

Board Three
Record Sheet

Put an amount of coins on the board (you must put one coin in each square) that comes as close to $1.00 as you can. Draw the coins you put on the board and write the total value of the coins. Check with other students to see who came the closest.

Name _____

Board Four
Record Sheet

If the rest of the coins were pennies and you had twelve coins, would you rather have $\frac{2}{12}$ quarters or $\frac{3}{12}$ dimes? Explain your answer.

Quarters

Dimes

Money Fractions

Name_____

Board One

Board Two

Money Fractions

Name _____

Board Three

Board Four
