Logic 1: Due September 28, 2018
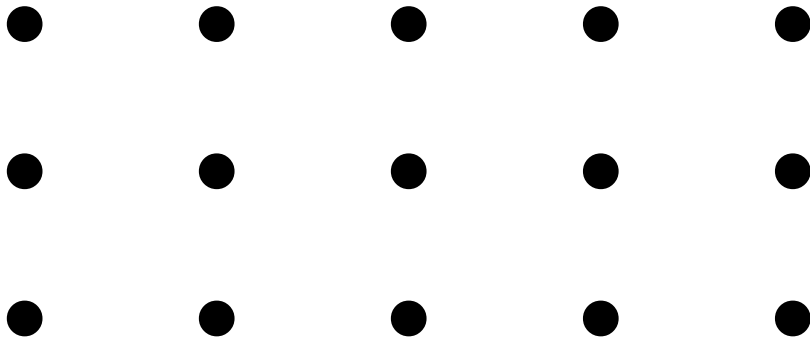
Name _____   **Period** ____

Problem 1   **Time =** _____

How many rectangular type boxes can be drawn using these points?
All lines need to be vertical or horizontal, no diagonal lines.

ANSWER = _____

●   ●   ●   ●   ●

●   ●   ●   ●   ●

●   ●   ●   ●   ●

Problem 2   **Time = _____**

Consider the square below. You are to draw five lines (remember that lines are straight and don't bend) across the square in such a way as to form as many regions as you can. What is the largest number of regions that can be formed?

 For example: If you can only draw two lines, the largest number of regions formed would be 4 while if you draw 3 lines, you will get 7 regions as shown in the pictures below.

2 lines gives 4 regions
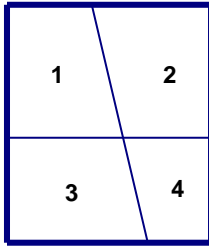
3 lines gives 7 regions
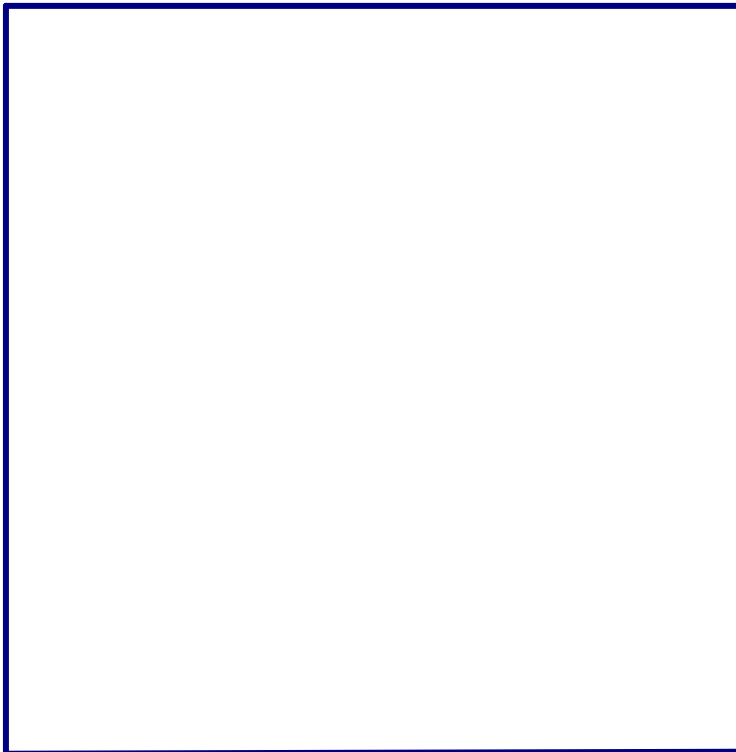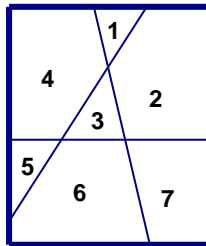
Problem 3   Time = _____

Fill in the blanks using each of the numbers 1-12 to make each row and column have a sum of 17. I have filled in the blanks with a few of the numbers to help you. I did have to use the number 2 twice in order to make things work for you.

2					
				2	

Problem 4   Time = _____

A, B, and C are all whole numbers. Find the value of A, B, and C given that

$$\frac{A^2 + B^2}{C^2} = 10$$ A = _____   B = _____   C = _____

Problem 5   Time = _____

Find the value of the letters in the true division problem.

```
        H I
   8 | M O M
     – M A
         O M
       – O M
```

M = ___   H = ___   I = ___   O = ___   A = ___

Problem 6   Time = _____

Using just the digits of 2, 3, 4, 5, 6, 7, and 8, find what each letter stands for in the problem below to make the problem a true addition problem. Each letter is a different digit (i.e. if g = 2, then t can't equal 2).


```
     GO
  + EAT
    NOW
```

G = ___   O = ___   E = ___   A = ___   T = ___   N = ___   W = ___

Problem 7   **Time = _____**

From the letters given, fill in the blanks to make real statements.

Example: **Given letters – BLAUDISGITLLN**

Answer:

T	A	L	L

B	U	I	L	D	I	N	G	S

Question 1   **Letters: PPLLDOUEOE**

Question 2   **Letters: YCHHTSRIAE**

Question 3   **Letters: DMOONNSLGAE**

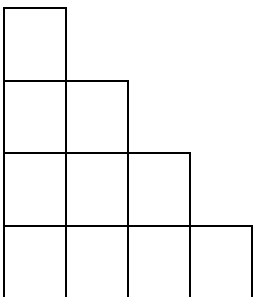|						

Problem 8   Time = _____

Make each row, column, and diagonal add up to 60.
Use the following numbers to fill in the missing blanks.
0, 0, 3, 6, 15, 18, 18, 18, 24, 24, 39

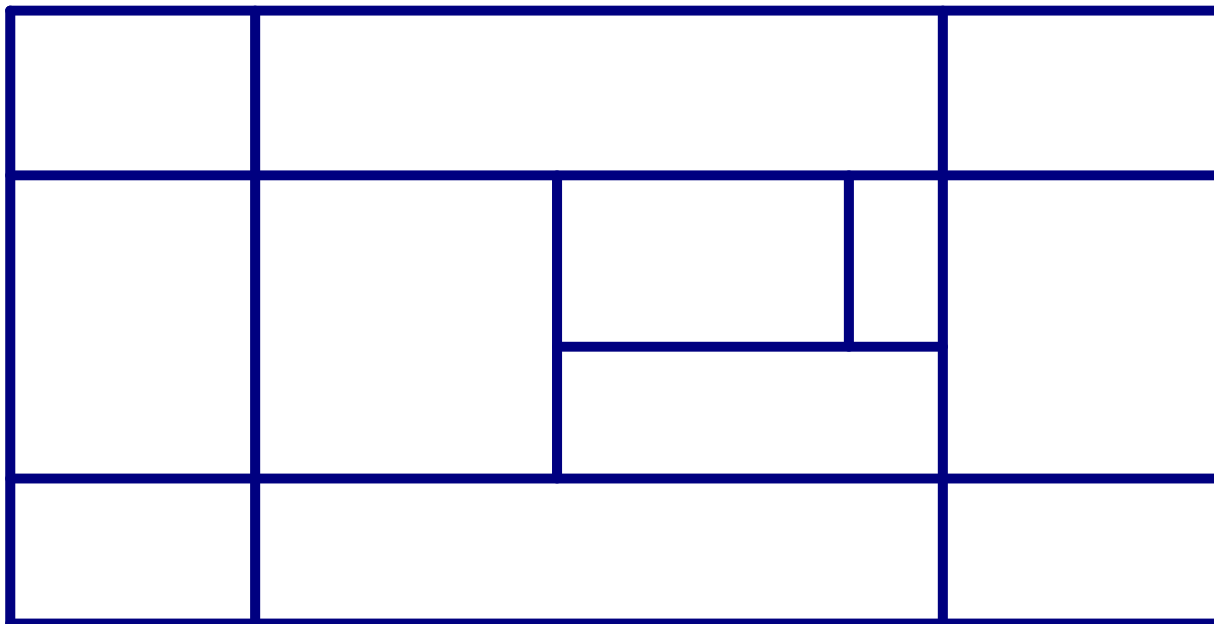| 12			21
			0
24		18	

Problem 9   **Time = _____**

Fill in the blanks with each of the numbers 1-10 such that no two consecutive numbers are adjacent to one another vertically, horizontally, or cornerwise.

Problem 10   Time = _____

How many total rectangles do you see? _____

Logic 1 Answers
(Due Friday, September 28, 2018)
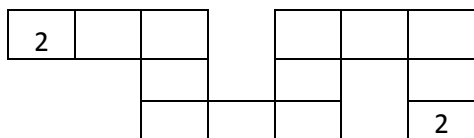
Name _____   **Period** _____

Problem 1   **Time = _____**

Answer = _____

Problem 2   **Time = _____**

Answer is _____

Problem 3   **Time = _____**

2					

(grid with 2 in top-left, 2 in bottom-right)

Problem 4   **Time = _____**

A = _____   B = _____   C = _____

Problem 5   **Time = _____**

M = _____   H = _____   I = _____

O = _____   A = _____

Problem 6   **Time = _____**

G = _____   O = _____   E = _____   A = _____

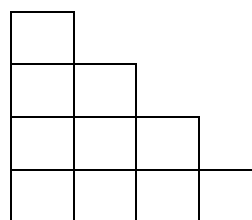T = _____   N = _____   W = _____

Problem 7   **Time = _____**

Word 1 = _____

Word 2 = _____

Word 3 = _____

Problem 8   **Time = _____**

12		21
		0
24	18	

Problem 9   **Time = _____**

Problem 10   **Time = _____**

Number of rectangles = _____