SOLVE IT!

November Logic Problems
Using the 100-Number Board

A *Create 'n Time* Project 2011

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Notes to the Teacher

- Use 1 sheet a day for a great opening activity.

- Have students solve the problems individually and then get with a partner to discuss and compare solutions. Use Think-Pair-Share to check answers. (See my Think-Pair-Share activity for detailed explanation!)

- Use the problems as homework. You can split them up or use them as a packet. Be sure to discuss in class, as many of the problems are multi-step.

- Use the problems in a math learning center or as an activity for "fast finishers."

- Be sure to emphasize that students show their work so they can explain how they got their final solution. I emphasize showing numbers (computations), pictures, words, or symbols.

- Extend the activity by having students make up their own problems to share with others. I find middle school students really like doing this activity in partners.

Have fun!

SOLVE IT! November Math Logic Problems

Name: _____

Solve each problem on your own. Be sure to show your work using the Hundred Number Grid. Cross out numbers that clues tell you will not work. When you have figured out the clues, write your answer on the answer line. We will discuss the problems in class and correct them together.

THE TURKEY BOXES

Mr. Simon's room plans to help pack Thanksgiving turkey boxes the week before Thanksgiving. The class wanted to know how many boxes were packed last year. Mr. Simon gave them these clues:
- The number is less than 100 and more than the number of days in November.
- The number is not odd.
- The number is divisible by 5.
- If 5 divides the number, the sum of the digits of the quotient is 9.

How many turkey boxes were packed last year? _____
<div align="right">answer</div>

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Name:_____

Solve each problem on your own. Be sure to show your work using the Hundred Number Grid. Cross out numbers that clues tell you will not work. When you have figured out the clues, write your answer on the answer line. We will discuss the problems in class and correct them together.

THE FIRST THANKSGIVING

Mrs. Hawthorne was telling the story of the Pilgrims' First Thanksgiving. One student asked how many people were at the feast. Mrs. Hawthorne gave the following clues for the students to figure it out:
- The number is a 2-digit number greater than the product of 12 and 5.
- The number is not divisible by 2.
- Both digits of this number are the same.
- The sum of the digits of this number is one less than half the number of days in November.

How many people attended the feast? _____

answer

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Name:_____

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THE PUMPKIN PATCH

   Jordon's family went on an outing to the Pumpkin Patch Farm. They saw several wagons piled high with pumpkins. Jordon asked the farmer how many pumpkins were in the wagon. The farmer said if Jordon figured it out, he could have the pumpkin of his choice. Here are the clues the farmer gave Jordon:
- The number is more than the number of months in a year but less than the number of weeks in a year.
- The number is composite.
- The number has 4 factors.
- The number is divisible by 3 but not by 2.

What is the number? _____

                                                          answer

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
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MOVIE PARTY

Nikki invited some friends over for a movie party. Her sister wanted to know how many people were invited. Instead of telling her, Nikki gave some clues and told her sister to figure it out! Here are the clues Nikki gave her sister:

- The number is even and a multiple of 4.
- If you count by 10's, you would not say this number.
- The 10's digit is greater than the 1's digit.
- The sum of the digits is the same as the number of days in a week.

How many people did Nikki invite to her movie party? _____

answer

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
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RAKING LEAVES

Max rakes leaves after school or on weekends to earn extra money. He has too many customers to take all the jobs so he asked Ben to help him out. Ben wanted to know how many lawns he would have to rake in a week. Max gave him these clues:

- The number is more than the days in a week.
- The number is less than the number of days in October.
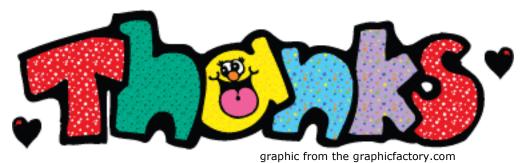- The number's two digits are the same.
- The number is prime.

How many lawns would Max have to rake? _____

answer

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
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