

Room 16 Math Problems



*Grades 1, 2, 3
Mr. Femiano
1995-96*

June 1996

Dear Parent/Guardian:

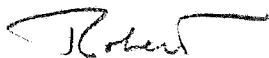
This booklet is a compilation and condensing of the many "challenge problems" we've been working on this year. Answers are not provided on purpose. You will have to see me in the Fall for the answers.

You can best help your child when they're stuck by reminding them of our problem solving tips:

1. Say aloud what the problem is asking you to find out
(if you don't know, read it again).
2. Draw the problem or act it out.
3. Put in small numbers in place of the large ones and read it again.
4. Work the problem backwards.
5. Make a chart or table.
6. Take a guess and check your answer. Now think again.
7. Reread the problem putting in information that you have already solved.
8. Get some blocks or other "things" to help you "see" the problem.
9. Ask an adult for a hint.

When a child gives you an answer, do not say "right" or "wrong". Instead ask them how they got their answer. Have them examine their own logic---try to guide in place of telling.

Realistically, if your child will work 20-30 minutes a weekday on these activities, that would be great. Take it on trips, too. I look forward to seeing these booklets and hearing your comments in September. Have a happy and relaxing summer.



Robert Femiano

1st grade

0, 1, 2, ____, 4, ____, ____, 7, ____, 9, 10

10, 9, ____, 7, ____, 5, ____, 3, ____, ____, 0

11, 12, ____, 14, ____, ____

20, 21, ____, 23, ____, ____, 26

19, 18, 17, ____, 15, 14, ____, ____, 11

0, 2, 4, 6, ____

Joe is 7 years old. How old will he be in 3 years?

Draw $6 + 1 =$ ____

$3 + 2 =$ ____

$5 + 5 =$ ____

27, 26, 25, ____, 23, 22, ____, 20, ____

Draw $3 + 7 =$ ____

$6 + 4 =$ ____

$2 + 8 =$ ____

What do I add to 5 to get 10?

Ten plus six is ____.

Ten plus ten is ____.

Nine plus five is ____.

10, 20, 30, ____, 50, ____, ____, 80, 90, ____

What 2 same numbers add to 16?

Draw $18 + 7 =$ ____

$23 + 10 =$ ____

$36 + 20 =$ ____

If Mr. P. is 37, how old was he last year?

If Joe is 10, how old was he last year? How old will he be next year?

Mr. P. will be 100 years old next year. How old was he last year?

If Mr. P. will be 52 years old next year, how old was he last year?

Becca had 20 teeth. She lost 6. Now how many teeth does Becca have?

Evelyn had one dozen eggs. Kevin gave her 3 more. Now how many does she have?

Jeff had a dozen cookies. He ate some and now has 7 left.
How many did he eat?

Meredith has 10 cookies. TJ has 2 more than Becca. How many do they have together?

What 2 same numbers add to 22?

What do I add to 10 to get 10?

Jeff is 10. Kevin is 3 years older than Jeff. How old are they together?

TJ had 15¢. Joe has 10¢ more than TJ. How much do they have together?

What 2 same numbers add to 20?

Chris had 2 dozen donuts. He ate 4. How many does he have left?

What number is 3 before 100?

Evelyn is 1 year older than Becca. If Evelyn is 10, how old are they together?

TJ is 1 year older than Chris. Together they are 21. How old is TJ?
How old is Chris?

Add 15 to my secret number and you get 15. Who am I?

Meredith has 17 baseball cards. Jeff has 30 more than Meredith. How many does Jeff have?

3, 6, 9, ____, 15, ____, ____, 24, ____

Joe has 3 more pogs than Kevin. If Joe has 23, how many do they have together?

98, 78, 58, ____, ____

21 kids in the class. If 19 are here, how many are absent?

6 kids chose lunch A. 8 kids chose lunch B. Everyone else brought their lunch from home. If there are 21 in the class, how many brought their lunch?

61, 64, ____, 70, 73, ____

21 kids in the class. 7 ask for lunch A. 7 ask for lunch B and 2 have their own lunch. How many are absent?

In 10 years Mr. P. will be 35. How old is he today?

42, 45, 48, ____, 54, ____, ____

In 7 years Meredith will be 30. How old is she today?

Joe brought in 20 pennies on Monday. He brought in 40 more on Tuesday and 39 on Friday. How many pennies in all?

71, 76, 81, _____, _____, 96, _____

Kevin is 5 years older than his sister. If his sister is 3, how old are they together?

Chris has 20 pogs. TJ has 7 more than Chris. How pogs do they have together?

20 kids in Room A. 30 kids in Room B, and 28 in Room C. How many kids in all?

90, 85, 80, 75, _____, _____, 60, _____

Chris has 3 more pennies than Evelyn. If Evelyn has 7, how many do they have together?

13, 16, 19, _____, _____, 28, _____, 34, _____

_____, 60, 50, 40, _____, _____, 10

_____, 37, 34, 31, _____, 25, _____, _____

Jeff had 2 dozen cookies. How many is that?

Evelyn has 2 dimes, 2 nickels, and 2 pennies. How much money is that?

18, 22, 26, _____, 34, _____, _____

_____, 69, 68, _____, 66, _____, 64, _____

Nick is 2 years older than Cricket. If Cricket will be 10 next year, how old are they together now?

39, _____, 43, _____, 47

What is the highest you can get on 3 dice if none of the numbers are the same?

$1 + 2 + 3 + \underline{\hspace{1cm}} = 10$

90, _____, 86, 84, _____, 80, _____

88, _____, 94, 97, _____

10, 30, 50, _____, _____

_____, 10, _____, 20, 25

How many is one more than two dozen?

Alex had some dogs. He gave away 3 and still has a dozen. How many did he start with?

$5 + 6 + 7 = \underline{\hspace{1cm}}$

_____, _____, 4, 6, 8

6 kids had lunch A. 8 kids had lunch B. If there are 23 students in all, how many have their own lunch?

There are 19 kids here today. How many are not here if we have 24 in the class?

There are 23 kids. 8 had hot dogs and 7 had pizza. How many had their own lunch?

Hannah is 2 years older than Justin. If Hannah is 13, how old are they together?

The twins ages make 22. How old will each be next year?

What do you add to 2 to get 30?

37, ____, 43, ____, 49, 52

What is five more than five fives?

If Johnny is 1 year older than Hannah and Hannah is 1 year older than Justin, how old are they together if Justin is 6?

____, ____, 27, ____, 47, 57

What is five more than five tens?

Johnny gave Jesus 2 toys. Now they have the same each. Together they have 12. How many did Johnny start with?

If Mr. F. is going to be 70 in two years, how old will he be in 10 years?

Kricket is taller than Nick but she is shorter than Allison. if Allison is shorter than Alex, put them in order.

Justin ate 8 eggs from 2 dozen. How many eggs are left?

____, 3, 5, 8, 12, 17, ____

____, 60, ____, 70, ____, 80

A pyramid has 4 triangles show how many triangles on 4 pyramids?

____, 20, 23, 27, 32, 38, ____

20, ____, 60, ____, 100

Margo has 2 dozen teeth but she lost some and now has 20. How many did she lose?

9, 11, 14, _____, 23, _____

Yesterday we had 4 math problems. Today we'll have 3 more than that. How many for today?

When counting by 5's what number is 7th?

_____, 50, 51, 53, 56, 60

How old is each kid if the triplets ages total 12?

Sunday, _____, Thursday, Saturday

Kricket is 3 years older than Julia. If their ages make 21, how old will Kricket be next year?

A, D, G, _____, M

A, B, D, G, K, P, _____

Z, X, V, T, _____

_____, 70, 74, 78, _____, 86

_____, 29, 49, 69, 89

Alex, Bianca, Catlin, Duffy, _____

Justin and Hannah had the same number of marbles. Justin got 1 more and now they have 17 together. How many does Hannah have?

apple, carrot, eggplant, gummi bear, _____

Nick lost 3 cards. Now he and Alex have the same. Together they have 10 so how many did Nick have at the start?

Draw $31 + 13$

Mr. Chhorn was 10 years old 10 years ago. How long will it be until he is 30 years old?

How many tens are there in 80?

Draw $27 + 40 + 3$ Count them up.

____, 95, ____, 85, ____, 75

If Mr. F. was 30 years old ten years ago, how old was he 12 years ago?

67, 63, ____, 55, 51, ____

$1 + 2 + \underline{\hspace{1cm}} = 20$

Draw and count them up: $42 + 15$

If Johnny will be 20 in 2 years, how old was he 2 years ago?

How many tens are in 37?

$\underline{\hspace{1cm}} - 1 = 12$

$100 - \underline{\hspace{1cm}} = 10$

$\underline{\hspace{1cm}} + 12 + 29 = 50$ (Draw it)

Jesus is reading a 100 page book. He has read all but 9 pages. What page is he on?

Can you find 3 numbers to make 10?

How much older is a 15 year old than a 7 year old?

19, 28, 37, ____, 55

How many ways can you find to make 12 using 2 numbers. Can you find 7 ways?

____, 20, 40, 70, 110

Alex is reading a book that has 50 pages. He has 11 pages left to read so what page is he on?

Allison will be 25 years old in 10 years. How long ago was she 10 years old?

Nick had some toys but he gave away 7. Now he has 13. How many did he start with?

____, 2, 1, 3, 2, 4, 3, 5, ____.

1 Dime = _____ ¢

1 penny = _____ ¢

1 Nickel = _____ ¢

1 quarter = _____ ¢

If Hannah gets a dozen more toys than she will have 25. How many does she have now?

Justin had a quarter and a nickel. He spent 10¢ so what two coins does he have now?

What is 10¢ more than six nickels?

How much is ten dimes?

Milk costs 35¢. What would 2 milks cost?

For milk money Nick had 3 coins. What were they?

Popcorn costs 35¢. What 5 coins could Kricket give to get a bag?

How much is 1 quarter, 2 dimes, 3 pennies?

3 quarters is the same as how many pennies?

There are 12 ways to make a quarter without using a quarter. What are they?

What is 100 take away 20?

Johnny has 3 nickels. How much more money does he need to get a milk, which costs 35¢ ?

3, 6, 10, _____, 21

Draw $23 + 34 + 13$

To buy a popcorn costs 35¢. Jesus has 1 dime and the rest in nickels. How many coins does he have?

98, 95, 91, 86, _____, _____

Which is more and by how much? (a) 6 nickels or (b) 5 dimes

What is 30¢ away from 10 dimes?

How much money is a half dollar?

Candy costs 15¢. Alex has a half dollar and a quarter. Does he have enough to buy 6 candies? How much can he buy?

Kricket had a hole in her pocket and she dropped a nickel, 3 dimes and 2 quarters. How much did she lose?

Three quarters is how much more than 6 dimes?

Allison had 3 nickels. She found 2 dimes and wants to get a toy that costs 50¢. How much more does she need?

Nick had 2 coins in his left hand. In his right he has 2 quarters. He has enough to buy 3 gums that cost 20¢ each. What coins are in his left hand?

_____, 96, 90, 84, _____, 72

Margo has a bag of 7 coins which make 40¢. She pulls out 4 pennies to give to Dom. What coins are left in the bag?

90, ____, 30, 0

Jesus has 20¢. He buys some gum and then has a nickel left. How much was the gum?

Kricket had 6 coins which make 30¢. There are two ways. What are they?

Are 2 quarters, 2 dimes, 2 nickels, and 2 pennies enough money to buy 2 toys that cost 40¢ each?

Popcorn cost 35¢. Can you find 7 coins to buy a bag? (2 ways)

Johnny had some money. He gave 20¢ to Alex and now he has 1 quarter, 1 nickel, 1 penny. How much did Johnny start with?

Justin lost 30¢. He now has 50¢. He started with 4 coins. What were they? (2 answers)

Use the numbers 2,3,4 to make a 5. You may add and subtract.

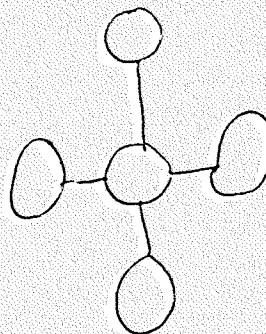
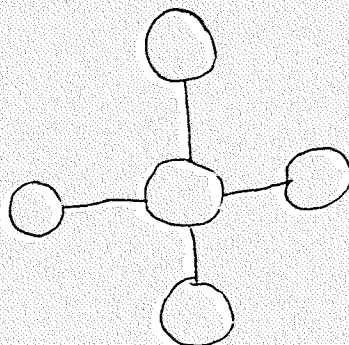
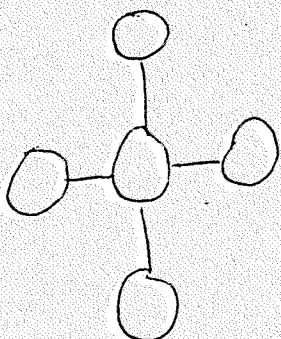
Use 1,2,3,4 to make a zero by adding and/or subtracting all numbers.

Ms. Zavala lost 2 coins and now she has 2 quarters left. Before she lost the money, she could buy 3 gums exactly that cost 20¢ each. What coins did she lose?

Can you draw a square using 4 triangles? How about with 5 ?

Use the numbers 1,2,3,4,5 to make each line add to

- (a) 8
- (b) 9
- (c) 10



2nd Grade

Adrienne has 4 coins in her hands. She needs 4¢ more to have a quarter. What coins does she have?

In three years Lencho will be 30. How old was he 5 years ago?

What 3 coins can you use to buy a 35¢ milk?

Kira is 13 years old. Bianca is 10 years older. how old are they together?

Anthony has 47 pennies while Teddy has 77 pennies. How many dimes could Teddy get for all his pennies?

Lencho has 36 dimes while Bianca has 56 dimes. How many more dimes does Bianca have?

Last year Adrienne was 20 years old so how long will it be until she is 30 years old?

Find 3 different ways to buy a 35¢ popcorn.

Sopheak has 10¢ more than Aleks. If Aleks has 6 nickels and a dime, how much does Teddy have?

What 2 coins are the same as 3 dimes?

If Teddy will be 10 years old next year, in how many years will he become 30?

Five dice are rolled. 2 of them are sixes and the total is 24. What could the other three dice be if they are all the same?

Sopheak has 3 coins. If someone gives him a dime, he'd have 50¢. What coins does he have now?

Next year Mr. F. will be 80. How old was he two years ago?

If Bianca had 5¢ more, she would have 25¢. What 3 coins does she have?

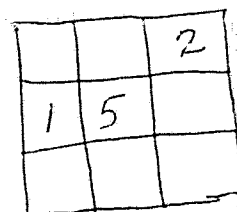
____, 4, 8, 12, ____, 20

Adrienne has 50¢. Take away her only dime and she'll have 4 coins. What are they?

Next year Ms. Zavala will turn 100. How old was she 5 years ago?

23 people had a hot lunch today. Choice A was hamburgers while Choice B was ravioli. If eight had Choice A, how many more chose ravioli than chose hamburgers?

Use numbers 1-9 to make this into a MAGIC SQUARE of 15. Remember, that rows, columns and diagonals all must make the sum of 15.



If you add 2 to me, I become half of 12. Who am I?

If Kira had 5¢ more, she'd have 40 cents. What 3 coins does she have?

Bianca had 40¢. She gave 15¢ to Adrienne and she now has seven coins. What are they?

Subtract one from me and you get 3 tens. Who am I?

Write a number that has no ones in it.

____, 79, 71, 63, ____

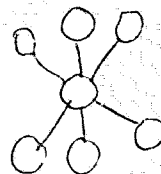
Teddy has 10¢ more than Anthony. If Anthony has 45¢, what four coins does Teddy have?

Lencho lost a dime so he now has 55¢. What 6 coins did he have before he lost any money?

Who am I? I am a 2 digit number. My digits add to 10. When you subtract my digits you get zero.

What is half of eleven cookies?

Use 1-7 to make the total (sum) along each line (a) 10 (b) 12



Sopheak needs 10¢ more to have enough money to buy two toys that cost 25¢ each. What 7 coins does Sopheak have?

Take 9 away from me and you still have 9. Who am I?

Adrienne is 8 years older than Lencho. If she is 24, how old are they together?

Anthony has 37 pages left to read from a 100 page book. What page is he on?

Dom is 1 year older than Margo. If their ages total 21, how old is each?

Teddy has 10¢ more than Lencho. If Teddy has 2 quarters and a nickel what 5 coins does Lencho have?

$$10 + 20 + \underline{\hspace{1cm}} = 80 - 50$$

If you had 6 dice that totaled 30 and 4 dice showed 6 dots each and the other 2 dice were the same, what is on the 2 dice?

Kira needs 40¢ to total \$1.00. What 3 coins does she now have?

What is half of a half dozen?

In 8 years, Sopheak will be 30. How long ago was he born?

What is half of 3 dozen eggs?

Adrienne rolled 6 dice and none of the numbers were the same. What was the total of her throw?

Lencho has 3 cents more than Anthony. If Anthony has 57¢ what two coins could Lencho have?

The number 37 is how far away from 100?

Six dice were rolled. All the numbers were the same except for one die. The total was 20 so what was rolled?

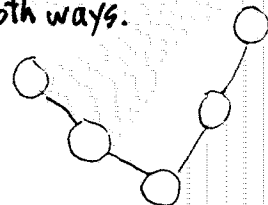
Who am I? I am less than 90 but more than 55. My digits add to 10. I am odd.

I have 3 coins and with 10¢ more, I'll have 45¢. What coins do I have?

Can you find 10 coins to make 49¢?

Bianca got 58¢ back from a dollar so how much did she spend?

Use numbers 1-5 along each line to make a sum of 9 *both ways.*



Teddy wants 100 pennies. He got 30 on Monday, 25 on Tuesday, and 13 on Wednesday. How many more does he need?

Mr. F. has 75¢. He has only dimes and nickels and he has the same amount of each. What coins does he have?

Bianca is taller than Adrienne. Adrienne is shorter than Kira. Kira is not as tall as Bianca. Ashley is tall than Bianca. Put the girls in order from tall to short.

3, _____, 7, _____, 11, _____

99, 95, 91, _____, 83, _____

91, 82, 73, _____, _____

What is half of one more than a dozen cookies?

100, 92, 84, 76, _____, _____

40, 39, 37, 34, 30, _____, _____

M and M's come in 4 colors. Each bag has 30 pieces. If there are 7 reds, 8 yellows and 15 greens, how many browns are there?

_____, F, J, N, R, _____

____, 19, 14, 10, 7, 5, _____, _____

____, 90, 87, 82, 75, _____

____, 60, 64, 70, 78, _____, _____

Add nine to me and I'll become double nine. Who am I?

I am an even number between 30 and 39. You hear me when you count by 3's. Who am I?

Bianca is 100 years old today. Teddy is 47. How much older is Bianca?

What 3 coins make more than 25¢ but less than 30¢ ?

____, 50, 53, 58, 65, _____

____, P, S, V, Y, _____

100, 90, 70, 40, _____

Mr. F. has a bag of 4 coins. He has no dimes but he has exactly enough to buy 4 toys that cost 10¢ each. What coins does he have?

Anthony rolled a 6 and 5. Kira rolled three less than that. What are all the possible rolls that Kira had?

Lencho reached in his pocket and withdrew 3 coins totaling 61¢. How many of these coins were dimes?

____, 10, ____, 14, ____, ____, 20

Adrienne spent 25¢ but gave the clerk one dollar. The clerk gave her back 4 "pieces of silver". What coins did she get?

Teddy rolled a 4 and 6. Sopheak rolled 2 dice and his total was half of Teddy's. What two possible rolls could Sopheak have made?

____, 97, 86, 75, ____

Bianca is 3 years older than her sister. In 5 years her sister will be 21. How old is Bianca today?

Mr. F. has the same number of pennies, nickels, and dimes. He needs 36¢ more to have \$1. What coins does he hold?

Kira had \$1.00 in pennies. She gave 12 to Anthony and spend 12¢ herself. How many pennies does she have left?

What is 10 less than 101?

$$\underline{\hspace{1cm}} - 9 = 9$$

$$\underline{\hspace{1cm}} + 28 = 100$$

$$100 - \underline{\hspace{1cm}} = 28$$

$$10 + \underline{\hspace{1cm}} = 28$$

What is the highest roll you could get with five dice if none have the same numbers?

$$1+2+3+4+5+6+7+8+9+10 = \underline{\hspace{1cm}}$$

Who am I? My tens is 3 more than my ones. My tens is even and my digits add to 5.

I have 10 coins. Half are nickels and half are dimes. How much is this worth?

What is half of (a) 102 (b) 130

Who am I? My 2 digits add to 8. My tens is larger than my ones. My digits are both even.

Can you draw a capital 'E' without lifting your pencil or tracing over any lines?

What is half of seven plus half of seventeen?

I have 20 coins. Half are dimes and half are pennies. How much is this worth?

$80¢ + 2 \text{ coins} = \1.15 . What are the two coins?

My digits add to 10. I have more ones than tens. My digits are odd. What two numbers could I be?

Alvero has 2 quarters, 2 dimes, and 1 nickel. Kira has double that but in only 3 coins. What are they?

____, 100, 150, ____, 250, ____

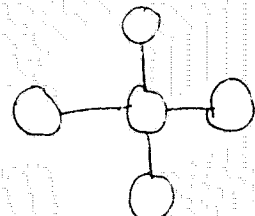
Sopheak has 75¢. Bianca gives him 4 dimes. Does he have enough to buy each of them a toy that costs 60¢ apiece?

What is 10 more than 101?

What is 10 less than 1000?

How much is 1 ten plus 2 tens plus 3 tens plus 4 tens plus 5 tens plus 6 tens?

Use 3, 6, 9, 12, 15 along each line to total 27.



100, _____, 140, 160, _____, 200

_____, 400, 440, 480, _____

What number is 30 less than 30 tens?

What is 3 dozen less than 100?

Who am I? My 2 digits add to 5. When subtracted you get 3. I'm odd.

_____, 50, 61, 72, 83, 94, _____

(greater) (less)
I am $>$ than 100 but $<$ 200. I have a zero in me. I am odd
and my digits total ten. Who am I?

Who am I? If you take half of me you get 3 digits all the same
that add to 9.

_____, 225, 250, 275, _____

Who am I? My three digits add to three and none are the same.
I am $>$ 200 and have nothing in my tens place.

In your head: $100 - \underline{\quad} = 66$

Take away 27 from me and you have twice 27. Who am I?

____, 101, 131, 161, 191, ____

Lencho is 3 years older than his sister. Together their ages make 39. How old is Lencho?

What is half of 101?

What is double $55\frac{1}{2}$?

Kira has 3 coins in her purse. Bianca has 15¢ more than her. If Bianca has 2 quarters and 1 nickel, what does Kira have?

Adrienne has 4 coins but she has 25¢ less than Sopheak. If Sopheak had 8 nickels and a dime, what coins would Adrienne have?

Teddy has made 4 dozen cookies but he wants 100 cookies. How many more does he need to make?

Two kids want to share 301 cookies. How many will each get?

Use the numbers 2-10 to make this a magic square of 18.

	2	
5		3

In Magic Squares, all rows, columns, diagonals add to same Magic Number.

Use the numbers 1-16 to make this a magic square of 34.

	3	2	
5			8
9		7	
4			1

Kira has 6 coins. Adrienne has 15¢ more than Kira. Adrienne has 9 nickles and 1 penny. What does Kira have?

Think real hard and try to find what R is worth.

R	S	40
35	25	15
T	V	W

Magic
Square

How far away from 140 is 112?

If $7\frac{1}{2}$ human years = 1 dog year, how many years old is a 2 year old dog?

$$27 + \underline{\quad} = 100 - 40$$

What is the sum of three twenty-sevens?

 , 100, 140, 180,

Anthony is 17 and Adriennne is 30. When Adrienne is 50, how old will Anthony be?

Who am I? Double me and add 1 and you get 75.

 , 775, 725, 700,

$$12 + 12 + 12 = \underline{\quad} - 4$$

Sopheak has 15¢ more than Teddy. Teddy has 5 coins while Sopheak has 3 quarters. What coins does Teddy have?

 , 201, 251, , 351

800 take away 30 is what?

Find 13 coins to make one dollar.

$$37 + \underline{\quad} = 100 - 21$$

 , 107, 120, 133, 146, ,

$$23 + 37 + \underline{\quad} = 100 - 12$$

$$18 + 28 + 10 = \underline{\quad} - 14$$

Which is more: (a) the most you can get on six dice where no number is the same or (b) the least you can get where no number is repeated?

Mr. F. is 16 years older than Dom. If Dom will be 27 in 12 years, how old are the two of them right now?

$$\underline{\quad} + 7 + 27 + 10 = 201 - 51$$

Eighty plus what would equal eight hundred?

Kira has 6 coins. She has 25¢ more than Lencho who has a half dollar. What coins does Kira hold?

$$180 - \underline{\quad} = 70$$

Who am I? I am > 100 but < 300 . My digits are consecutive and they add to nine.

What 5 coins make change for \$1.00 ?

$$700 - \underline{\quad} = 150$$

Who am I? I am < 500 but > 300 . My digits total 8. I am an odd number and have a 1 in my tens place.

Write a number that has more ones in it than tens and less hundreds than tens. Make the number greater than 350.

Take half of me and you get 37. Who am I?

Who am I? I am > 500 but < 800 . My digits add to 18 and they are all different. My tens is the largest and the hundreds is smallest.

Use numbers 8, 10, 12, 14, 16 to complete this magic square.

		10
12	12	
14		

Adrienne wants half of \$1.50. What 4 coins will she get?

$$\underline{\hspace{1cm}} - 25 = 25$$

Triple me and you get 33. Who am I?

Anthony had 4 coins. He got 3 quarters more and now has \$1.16.
What coins did he have?

What 3 coins is half of \$1.30?

Lencho found 5 coins and said if he doubled it, he'd have \$1.70.
What coins did he find?

If you triple my secret number you get 42. Who am I?

Kira has 35 rabbits while Adrienne has 15 more than that. How many
do they have together?

How many tens groups can you make from 187 pennies?

Sopheak is twice as old as Teddy. If Sopheak is 32, how old are
they together?

Alvaro has only dimes while Aleks has 10 quarters. Alvaro has twice
as much money as Aleks, so how many dimes does Alvaro have?

Who am I? I am less than 100 and am even. My tens digit is half
my ones. My digits total 12.

1000 pennies is how many dollars?

$$80 + \underline{\hspace{1cm}} = 201$$

 , 187, 190, 194, 199,

$$\underline{\hspace{1cm}} - 30 = 80 + 90 + 1$$

____, 601, 610, 619, ____

4, 14, 25, 37, ____

____, 500, 498, 501, 497, 502, ____

Kira lost 40¢ and now has the same as Anthony. Together they have \$3.00. Kira had only 2 types of coins before she lost her \$0.15. What were they?

I am collecting dimes and already have 20. How many more will I need to have \$4.30?

Allison had 15¢ more than Lencho. She gave the 15¢ away and now the two kids have the same and together they have \$1.80. What 2 types of coins did Allison have before she gave away the 15¢ ?

____, 81, 95, 110, 126, ____

Teddy dropped a quarter in the street drain and now has the same as his friend Sopheak. Together they have \$1.70 so what five coins did Teddy begin with?

Anthony is shorter than Adrienne but taller than Lencho. Lencho is not as tall as Sopheak but Sopheak is shorter than Anthony. Put in order from shortest to tallest.

____, April, _____, August, October, _____

artichokes, candy, frankfurter, jelly, _____

If Anthony gave 35¢ to Lencho they would both have the same for a total of \$2.50. What 4 coins did Anthony have before he gave away the money?

If Allison had 35¢ more, she'd have half enough to but a toy at \$2.10. What 8 coins does Allison have?

Complete this magic square.

2 tens	1000	4 + 4
2 ones	- 999	+ 4 + 4
		half of half of 16

What 2 consecutive (next to each other) numbers add to 71?

Teddy had some money. He got 15¢ from Adrienne and now they have the same. Together their money makes \$2.70. What 5 coins did Teddy have before he got the money from Adrienne?

____, ____, 621, 633, 646, 660

What is 3 more than 3 tens plus 3 ones plus 3 hundreds?

Lencho lost half of his money and now has \$0.85. Before he lost his money, how much more did he need to have \$5.00?

$$36 + \underline{\hspace{1cm}} = 500$$

What is ten more than ten hundreds?

How many dimes are in \$1.92 ?

____, 880, 900, ____, 940

$$\underline{\hspace{1cm}} - 250 = 550$$

Alvaro lost \$0.65 and now he has the same as Aleks. Together the boys have \$0.70. What 5 coins did Alvaro have at first?

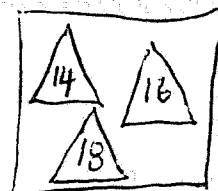
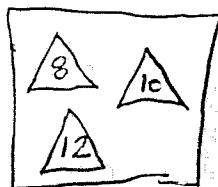
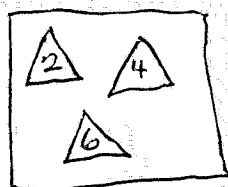
Sopheak spent \$1.05 and now has half of what Lencho has. Lencho has 6 quarters, 6 dimes, and 6 nickels so how much did Sopheak start with?

$$\underline{\hspace{1cm}} + 81 = 1000$$

What is half of half of one hundred?

Allison had 87 pennies and she won some more. She is now 10¢ shy of \$2.00. How much did she win?

Move just one triangle so the sum in each square will be the same.



Adrienne had 4 coins but she was 15¢ short of \$1.00, What coins did she have?

$$\underline{\hspace{1cm}} + 30 = 50$$

How much did Teddy begin with if he spent \$1.35 and now he has the same as his friend, Anthony, and together they have \$1.10 ?

Kira gave Adrienne half of her money. Adrienne already had 25¢ and now she has \$1.10. So how much did Kira begin with?

How many months is in half of 3 years?

How many dimes is 1010 pennies?

Allison lost \$0.45. Now she has the same as Margo. Together they are 10¢ shy of \$2.00. How much did Allison begin with?

Adrienne is 3 years younger than Lencho. Together their ages make 51. How old is each?

Kira spent some money and now has \$1.05. She bought two items that cost \$0.62 each so how much did she begin with?

How many tens are in this number: 3 ones + 7 hundreds + 6 tens?
(This is not the same as what numbers is in the tens place.)

$$\underline{\hspace{1cm}} - 900 = 510$$

Anthony paid \$21.10 for his new shoes. If he paid for them using only dimes, how many did he give the clerk?

A painter used 7 gallons of white, half as much yellow, and 1/2 gallon of blue. If paint costs \$10.00 per gallon, how much did this paint job cost?

$$41, \underline{\hspace{1cm}}. 53, \underline{\hspace{1cm}}$$

$$80, \underline{\hspace{1cm}}, 94, \underline{\hspace{1cm}}$$

What is half of 1001?

Teddy wants to buy a ten dollar toy. He has 10 quarters, 10 dimes, 10 nickels, and 10 pennies. How much more money does he still need?

Lencho is half of Mr. F's age. In 8 years, Mr.F. will be 56, so how old is Lencho?

____, 101, 131, 161, ____, ____

Dom has half as much money as Margo. If Margo has 3 quarters and 7 nickels, what 11 coins could Dom have?

Anthony has 3 hats and 3 shirts. How many different ways can he wear a hat with a shirt?

What number is ten less than one thousand one?

What is the least number of coins you need to make 99¢ ?

What is the largest number you can make with 4 even digits?

Triple me and you get 3 more than 4 dozen. Who am I?

What is half of half of one thousand?

150, 300, ____, 600, ____

Who am I? My three digits add to 12. I have no tens.
I am > 300 but < 400 .

10, ____, 22

100, ____, 400

What is one more than half of 13?

Who am I? I have 12 tens in me and my digits add to 12.

Take away half of me and you get half. Who am I?

How many quarters are in \$25.00?

Who am I? I have 100 tens in me but have only 2 different digits.

Sopheak takes out of his left pocket 2 quarters and a dime. He has twice that in his right pocket. Does he have enough money to buy a toy that is on sale for half its original price of \$3.20 ?

I have ten tens in me and my digits add to ten. Who am I?

How many days are in a half of a year? (365 days in whole year.)

Adrienne gave Kira 13 coins that made \$1. What were they?

Use the numbers 2,3,4 to make a 5. You can add or subtract.

Use 1,2,3,4 to make a zero. You can add or subtract.

Use the numbers 4-19 to complete this magic square.

4	15	10	17
		5	
13	6		
		12	

Grade 3

In 12 years Brittany will be 100 years old. How old will she be 80 years from now?

Ashley said, "I have twice as much money as Catlin." If Ashley had 30 dimes, what 4 coins could Catlin have?

If Duffy had 29¢ more, he could buy four toys that cost \$1.07 each. How much money does he have ?

Take away 100 from me and I become half of 100. Who am I?

When counting by 10's, what number comes right before 409?

____, 200, 205, 210. ____

The story we are reading aloud, Matilda, has 240 pages. If we are on page 134, how many pages remain?

Mallory has only dimes and pennies. If she has \$1.03 but has only two dimes, how many pennies would she have?

____ + 27 + 33 = 60 - ____

Use the numbers 15-23 to complete this MAGIC SQUARE of 57.

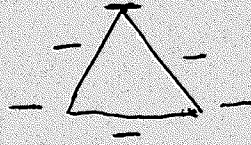
In Magic Squares, all rows, columns, diagonals add to same number.

22		
18		16

Complete this MAGIC SQUARE.

350	250	150
		200

Use numbers 4 - 9 to make this number triangle add to 20 along each side.



Ezra has \$1.10. He can buy exactly 5 toys. How much will each cost?

Take away 3 from me and you have half of 3. Who am I?

_____, 1000, 900, 700, 400, _____

1000, 975, 925, 850, 750, _____, _____

If Jarrod was half of 7 years old, how many months would this be?

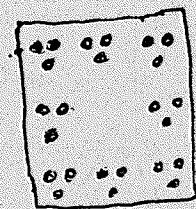
From \$10.00, how much was spent if Aleks got back 7 quarters and 7 dimes?

Ashley has the same number of quarters and nickels. She has \$3.00 so what coins does she hold?

Duffy needs 8 cents more to buy 9 toys that cost 12¢ each. What 11 coins does Duffy have?

Add 3 to me and I become one third of 300. Who am I?

A man gave his wife a pin that had 9 diamonds on each side as shown. Later he took it and rearranged the diamonds so that he could take away 4 (to make into earrings) and still have 9 on each side. How did it look then?



What is the highest roll you can get with 7 dice?

Ezra has \$1.23. Mr. F. has 42¢ more than that. What four coins could Ezra have?

If 4 comics cost \$2.00, how much would 5 comics cost?

What number is 5 tens less than 635?

Using the numbers 16, 17, 19, 23, 24 as many times as you want, can you make a sum of exactly 100?

Can you find 50 coins to make a dollar? (2 answers)

Find 75 coins to make one dollar.

Can you find (a) 30 coins (b) 40 coins (c) 60 coins (d) 70 coins (e) 80 coins to make one dollar?

What three coins make \$1.11?

You have the same number of quarters, nickels, dimes, and pennies. How many do you have of each if your total is \$6.15.?

Catlin has \$2.45 cents. She has only quarters and dimes, What are the two possible answers?

What is half of half of half of 1000?

Duffy is exactly 40 years older than Mr. F. If their ages total 41, how old is each?

From a ten dollar bill, Brittany gets exactly 352 pennies of change. If she bought two items of the same price, how much was each?

Mallory needs $1\frac{1}{2}$ days to clean her room. How many hours is this?

From \$10.00, how many pennies would you get back from buying 3 toys that cost \$3.33 each?

What 3 consecutive odd numbers total 75?

____, 241, 230, 220, 211, 203, _____, _____

Who am I? My different digits total less than 4. There are 3 possibilities. I am the odd one.

Use numbers 4 - 19 to make this a MAGIC SQUARE of 46.

4		10	
	16	5	
13	6		
		12	

Mr. F. says that last year he was twice as old as Dominic but this year you can reverse the digits in his age and have Dom's age. How old are they together?

From a ten dollar bill, Aleks receives the exact same number of nickels and quarters in change. He got 2 items that each cost \$3.95. How many quarters did he get back?

Ashley takes 5 quarters and twice as many dimes from her purse and says that with two more coins, she would have enough to buy something for \$1.50 and something for \$0.95. What 2 coins does she need?

Ezra had some baseball cards. He gave half to Jarrod. Jarrod gave half to Duffy. If Duffy had 19 cards, how many did Ezra start with?

Brittany had one thousand pennies. She spent \$2.84 and gave her sister \$1.37. How much is left over?

____, 1001, 1004, 1007, _____, 1013

____. 397, 377, 357, 337, _____, _____

$$263 + \underline{\hspace{2cm}} = 1000$$

$$999 - \underline{\hspace{2cm}} = 199$$

$$\underline{\hspace{2cm}} - 146 = 146$$

On a 20-sided die, what is the largest roll you can get with 3 dice where none of the numbers are even?

\$1.35 less 80¢ equals what two coins?

What is 105 less than $\frac{1}{2}$ of 1000?

Who am I? My 3 digits make the sum of 24. They are consecutive, but not in the right counting order. The hundreds place has the largest digit.

Catlin has the same number of dimes and half dollars. She has
(a) \$3 (b) \$9

$347 + 347 + 347 + \underline{\hspace{1cm}} = 1050$

If I count by 10's how long will it take until I count past
(a) 502 (b) 1070

A box can hold 10 toys. How many boxes would be needed for 727 toys?

How many dimes are in (a) \$165.00 (b) \$97.12

How much money (in dollars) is 10,000 pennies?

What number is ten more than 1090?

What number is one hundred less than 1090?

What two numbers are ten away from ten thousand?

How many tens are in 1111?

What number is the same as 20 hundreds.

How much is 100 sixes taken away from 100 tens?

1001, 1108, 1215, 1322, _____

What is 101 less than 2000?

Use 0,1,2,3 to write at least 15 different 4-digit numbers. Can you find all 18 possibilities?

How many dimes is this worth: $1027¢ + 2900¢ + 87¢$

Who am I? My digits add to 8. I am > 500 . Two of my digits are the same. My largest digit is 8 more than my smallest.

_____, 807, 704, 601, _____

Who am I? My three digits are consecutive and add to 18.

Who am I? My 4 digits add to 3. I am odd and only two digits are the same.

Is 10,000 an odd or even number. How do you know?

____, 5001, 5300, 5599, ____

$299 + 200 + 199 + 100 =$ ____

In your head: $1000 - 374$

What 4-digit number is 1010 away from 10,000?

Who am I? My 4 digits are all even and they add to 26. I have a 2 in my ones place.

807, 1000, 1193, ____

Who am I? Take half of me and add it to myself and you get 105.

Use the digits 1-16 to make this a MAGIC SQUARE of 34.

	3	2	
5			8
9		7	
4			1

What is my secret number. The digits add to 11. I am > 800 but < 1000 . I am odd and do not have a 1 in me.

____, 761, 1001, 1241, _____, _____

One thousand take away what number will leave you with 473?

Brittany has 3471 pennies. Mallory has 5580. How many dollars more does Mallory have?

How many weeks is one-fourth ($\frac{1}{4}$) of a year?

Catlin has \$31.27 while Duffy has \$50.00. Duffy has how much more?

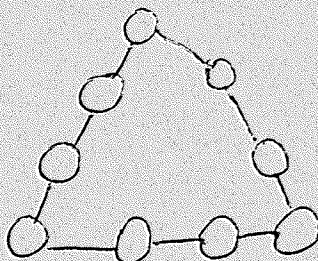
How much bigger than 1227 is 1600?

Add: $37 + 1090 + 403 + 684$

How many months old is a $3 \frac{3}{4}$ year old?

In how many months will a $\frac{2}{3}$ year old baby turn 1?

Use the digits 1-9 to make the total along each line be 23.



____, 1111, 2222, _____, 4444

____, 1010, 1500, 1990, _____

404, _____, 500

Brittany had 5001 pennies. She spent \$24.71 so how many pennies remain?

$27 + 2 + 143 + 1960 + X = 2600 - 173$ So $X = ?$

In seconds, what is $\frac{1}{3}$ of half an hour?

Take away $\frac{1}{4}$ of me and you get $\frac{3}{4}$. Who am I?

____, 1780, 2588, 3396, _____

When skip counting by sixes, what is the sixth number?

When skip counting by 7's, how many times will it take to get to 77?

Draw 3 different arrays that use 16 tiles.

What is the area of a rectangle that measures 8 by 6?

What is the perimeter of this array (3 by 5)?



Is anything wrong with this problem:

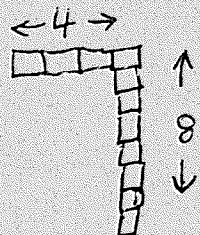
$$\begin{array}{r} 184 \\ +32 \\ \hline 504 \end{array}$$

$X + 27 + 1067 = 10,001 - 8101$

My secret number is > 100 but < 200 . My digits add to 10. The tens digit is twice the ones. Who am I?

Look at the array at the right. How many more tiles would be needed to complete the array?

Which is more: the perimeter or area of this array?



5 kids were in a spelling bee. There were no ties. Mallory did not come in first while Ezra was neither first nor last. Mallory was one place ahead of Ashley. Jarrod was not second but he was two places above Duffy. In what order did they finish?

Which is longer: $\frac{2}{5}$ of a minute or $\frac{1}{2}$ minute?

Who am I? I am greater than 400 but less than 600. My digits add to 10 yet I have no tens. None of my digits are the same.

Mallory wants to build 200 cars. Will 600 wheels be enough?

You go to Funplex for one hour. You spend $\frac{1}{4}$ of your time on video games and 30 minutes on LaserTag. You go to the Batting Cages for $\frac{2}{10}$ of your original time. How much time is left for lunch?

Use 48 tiles to make 5 arrays. Write the dimensions, perimeter and area for each.

Use repeated addition to find 36×7 .

Half my secret number is $\frac{1}{2}$. Who am I?

One-third of my secret number is zero. Who am I?

About how many days is $\frac{1}{3}$ of a year?

Brittany said to Ashley, "I have half of \$5.00." Ashley responded, "I have 3 times that but it's all in quarters." How many quarters does she have?

Floor tiles come a dozen to a box and a box costs \$4.50. How much will it cost to tile a floor that is 10 by 5?

Duffy says that in 36 more pages, he'll be $\frac{2}{3}$ done the 150 page book. What page is he on?

What are the dimensions of the 4 arrays you can make from 30 tiles?

Use only odd numbers 3-19 to complete this magic square. *Magic Total = 33*

13		
		19
	7	

____, 60, 70, 90, 120, ____, 200

____, 1010, 2001, 2992, ____

$$1047 + 263 + X = 1500 - 147$$

How many seconds is $\frac{4}{5}$ of a minute?

Jarrold bought a jacket for \$46.49. He paid for it with 4 bills and 7 coins. What were they?

What 5 consecutive odd numbers add to 85?

____, $7\frac{1}{2}$, 9, ____, 12

What is the perimeter of a square made from 64 tiles?

What is the perimeter of a square made from 36 tiles?

____, 2020, 3018, 4017, ____

Round to the nearest tens, then add:

(a) $602 + 87$ (b) $3 + 111 + 1052$

Round to nearest hundreds, then subtract:

(a) $829 - 761$ (b) $1087 - 347$

If $X - 3409 = 6498$ then which is a reasonable answer:

(a) 3000 (b) 9000 (c) 10,000 (d) can't be done

Round to nearest hundreds (a) 49 (b) 957 (c) 4778

Round to nearest thousands then add or subtract:

(a) $1097 - 318$ (b) $9480 + 510$

$$X + 107 + 1094 = 4010 - 1127$$

A rug costs \$1.50 for each square meter. If a room measures 10 meters by 10m. how much will it cost for the rug?

What is $\frac{1}{2}$ of $\frac{1}{3}$ of a dozen?

Round 8077 to nearest ten, hundred, thousand

What is 327 times 4?

Catlin had some basketball cards. She got 496 more for her birthday. She found 2705 and now has the same as Ashley who used to have 5050 but she lost 1327. How many did Catlin begin with?

What is half of two-thirds of a 30 day month?

A rug costs $\frac{3}{4}$ of a dollar for every square foot. How much will it cost to cover the floor of a 2 foot by 4 foot clubhouse?

Round 9551 to nearest thousands, hundreds and tens.

Can you find more than 12 ways to make a 12 using just two numbers?

It takes 300 tiles to cover a tabletop. If the table measures 10 tiles in width, what is the length in tiles?

What is $\frac{4}{7}$ of 7000?

Dom had some pencils. He used 1746 in fifth grade and now has the same as his sister. Margo had 397 pencils then she got 2707 more so she'd be ready for fifth grade. How many did Dom start with?

A room measures 7 by 9 feet. What is $\frac{2}{3}$ of the area?

Ezra had some pickles. He got 100 dozen more and now has the same as Brittany, who had 3041 but ate 792. How many did Ezra have before he got the 100 dozen?

What number comes 100 after (a) CCC (b) XD (c) LM

Round to nearest tens: (a) DLIX (b) CMXIV

____, XXII, XXXIV, XLVII, ____

Aleks had some marbles. He won 1247 more at a game with Alvaro. In the same game, Alvaro lost 368 from his collection of ten thousand. Now they have the same so how many did Aleks begin with?

What is $\frac{3}{4}$ of the area of a square with one side of ten?

What is $\frac{1}{2}$ of $\frac{3}{4}$ of the area of a 2 x 8 rectangle?

LM times IV equals what?

Who am I? My thousands digit is the only odd number. My hundreds place has the largest number. My 4 digits total 9. I have a zero in me but no 6's. My tens is the smallest digit.

At the beach, Jarrod collected 7000 shells but lost some on his way home. Once home, he put this in a array fo 10 by 110 and he had one left over. How many shells did he lose going home?

X, CXV, CCXX, _____, _____

Catlin had some cats. 1247 of them ran away and now she has 20 less than 200 dozen. How many did she begin with?

What is $\frac{3}{5}$ of the area of a square that measures 20 on one side?

463 times _____ = 1852

Mr. F. has black hair and some people with black hair have temper tantrums. So we know at Mr. F. has tantrums. Is this true, false or uncertain. Explain.

On a number line, what is 1 away from 7900? (2 answers)

What is $\frac{1}{2}$ of $\frac{1}{3}$ of $\frac{1}{3}$ of a 6 by 4 rectangle?

Mallory has 1347 dimes. She got some more and now has \$301.00. how many dimes did she get?

Using the numbers 16, 17, 23, 24, 39 as many times as you'd like, can you make a total of 100?

Who am I? My three digits add to eight and two of them are the same?

Jarrold has 2 more dimes than quarters. If he has \$2.30, what coins does he have?

If 4 comics cost \$2.00, what would 3 cost?

If 5 apples cost \$1.00, what would 7 cost?

Licorice is sold 3 for a dime. How much can you buy with 3 quarters?

Duffy is 13 years older than his brother. In 17 years, his brother will be 102 so how old are the two boys together right now?

If a puppet show last for exactly one hour, how many seconds would that be?

If a kid is 1 and $\frac{2}{3}$ of a year old, is this more or less than 18 months?

What fractional part of a week (Sun. - Sat.) do you not have school?

$$10,000 - \underline{\hspace{2cm}} = 2655$$

Add 3 to me and I become $\frac{1}{3}$ of 300. Who am I?

How do you know if ten thousand is an odd or even number?

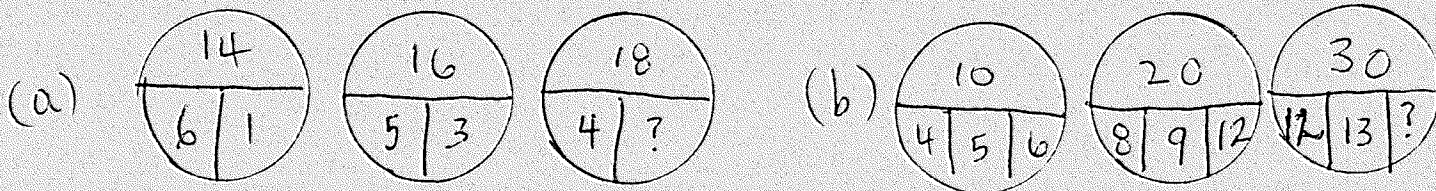
Which is more: the perimeter or area of a 6 by 5 rectangle?

What is half of half of 30,000?

What is half of 2,500?

 , 10,015, 11000, , 12,970

What is one-third of ten?



A baker makes cookies. On every 4th one, he puts icing. On every 7th one, he puts sprinkles. Out of 5 dozen cookies, how many will have both icing and sprinkles.

Margo is three times Dom's age. Together they total 44. How old is each?

____, 13,400, ____, 15,300, 17,200, ____

$$100 + \underline{\hspace{2cm}} = 20,000$$

$$(LX - XL) + C + D + M = \underline{\hspace{2cm}}$$

$$(MC - CM) + MCM + \underline{\hspace{2cm}} = MMD$$

$I = 1$ $C = 100$
 $V = 5$ $D = 500$
 $X = 10$ $M = 1000$
 $L = 50$
 Roman Numerals

Put these in order from least to most: $1/3$, $1/2$, $2/3$, $1/5$, $1/6$

Sixteen time eight equals what?

Is zero an odd or even number. How do you know?

Put in descending order (most to least): $1/4$, $1/2$, $1/6$, $2/4$

5 is the halfway point between what two numbers? Find at least two more answers.

Fill in the blanks so the numbers are evenly spaced:

$$0, \underline{\hspace{2cm}}, 12$$

$$0, \underline{\hspace{2cm}}, 120$$

$$10, \underline{\hspace{2cm}}, 110$$

$$5, \underline{\hspace{2cm}}, 35$$

$$0, \underline{\hspace{2cm}}, 450$$

$$10, \underline{\hspace{2cm}}, 100$$

$$0, \underline{\hspace{2cm}}, \underline{\hspace{2cm}}, 12$$

$$100, \underline{\hspace{2cm}}, \underline{\hspace{2cm}}, 1000$$

$$0, \underline{\hspace{2cm}}, \underline{\hspace{2cm}}, 75$$

$$0, \underline{\hspace{2cm}}, \frac{1}{2}$$

$$0, \underline{\hspace{2cm}}, \underline{\hspace{2cm}}, \underline{\hspace{2cm}}, 1000$$

$$116, \underline{\hspace{2cm}}, \underline{\hspace{2cm}}, \underline{\hspace{2cm}}, \underline{\hspace{2cm}}, 196$$

What is half of 1996?

If $\boxed{\Delta} = 7$ and $\triangle = 8$ what does $\boxed{\square} = ?$

If $\boxed{\triangle} = 6$ and $\triangle = 7$ then $\boxed{\square} = ?$

Who am I? I have eleven hundreds is me. MY digits add to eleven.
I am odd. When multiplied, I total zero.

_____ < $1/7$

What is $1/3$ of $1/3$ of 54?

What point or number is midway between 1 and 13,101?

What is the area of a 9 by 18 rectangle?

Can you find 21 coins to make a dollar?

$(7 \times 16) \div 7 =$ _____

Solve 99×3 in your head.

What is $1/2$ of $1/3$ of $1/6$ of 6 half dollars and 6 dimes?

Use all the numbers 1,2,3,4 to make zero. You can use addition and subtraction.

Use 1,2,3,4,5 to make 5. Use them again to make 1.

Use adding, subtracting, or multiplying to make 7,8,9,10 into 1.

Use add, subtract, multiply to make 8,5,4,7 into 24.

2,8,8,4 into 24.

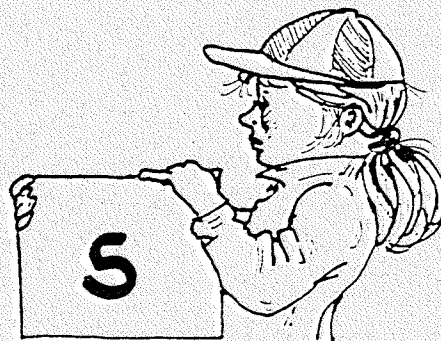
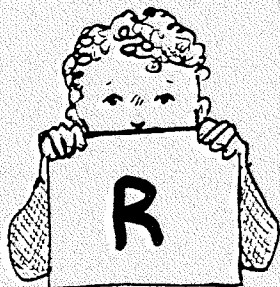
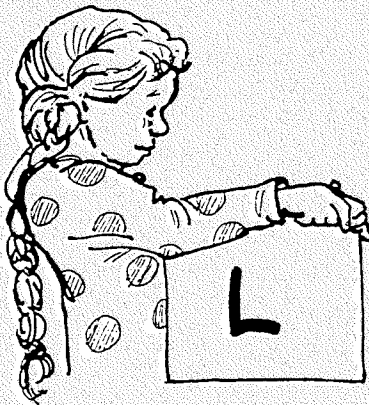
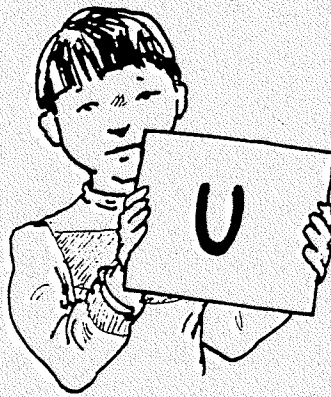
3,4,5,5 into 24.

Use 6 of these numbers to total 100: 13, 15, 17, 19, 21 (4 answers)

I have more than \$1.00 in change but do not have exact change for \$1. What coins could I have? What is the most I could have?

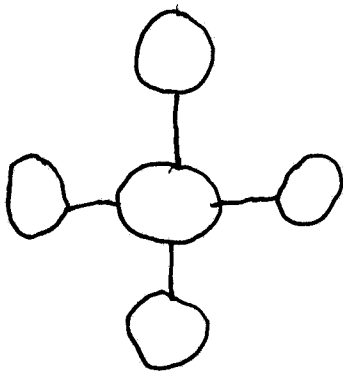
Complete this Magic Square:

452			
209	76	398	
	425	101	
49			371



Number Bubbles

These puzzles are easiest to solve using moveable numbers which allow rearranging rather than pencil erasures. Using an Ace-9 set from a deck of cards might benefit young children still counting. Older puzzlers can tear bits of paper, write the numbers and manipulate to solve.

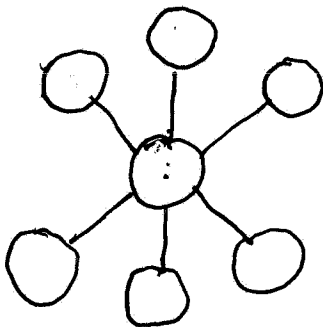


Use numbers 1-5 to make the total along each line add to:

(a) 8

(b) 10

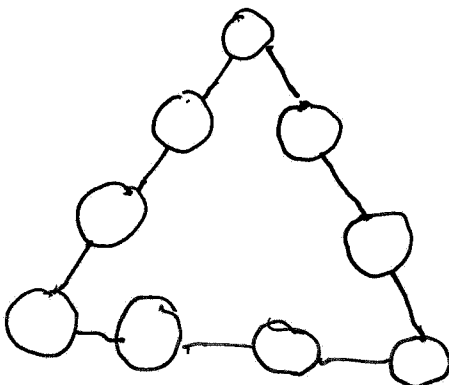
(c) 9



Use numbers 1-7 to make the total along each line add to:

(a) 10

(b) 12

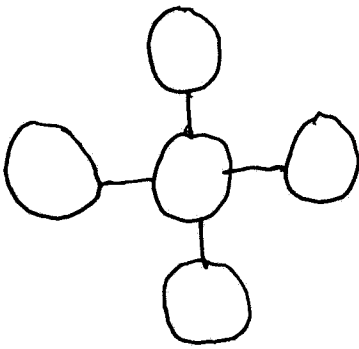


Use numbers 1-9 to make the total along each line add to:

(a) 23

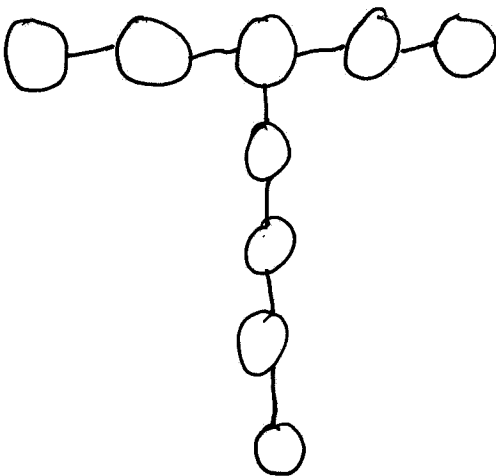
(b) 20

(c) 17



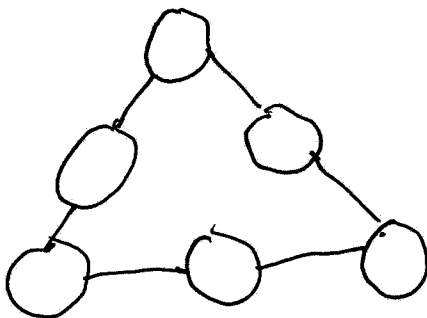
Use even numbers 2-10
so each line adds to:

- (a) 16
- (b) 18
- (c) 20



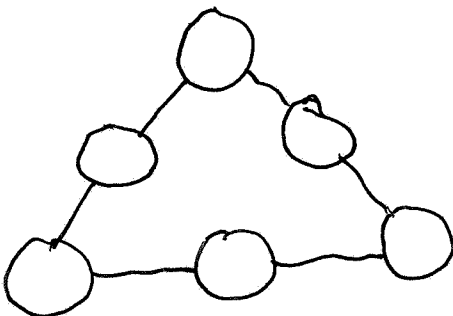
Use numbers 1-9
so each line adds to:

- (a) 23
- (b) 25
- (c) 27



Use # 1-6
so each side adds to:

- (a) 9
- (b) 12



Use the odd numbers 1-11
so each side sums to:

- (a) 15
- (b) 21

Magic Squares

Rows, columns and diagonals in each square always add to the same number. Sometimes the "magic sum" is given, other times you need to calculate it.

9		
4		
5		3

can you complete these squares?

		40
35	25	15

4		6
		5
	3	

Magic Total
21

Magic Total
57

22		20
18		16

	3	2	
5			8
9		7	
4			1

Magic Sum
of 34

400		100	
	160	50	
130	60		
		120	

Magic Sum
of 460

17		1		15
	5		14	16
4	6	13		
	12		21	3
11			2	

Use # 1-25 to make this a Magic Square of —.

452	0		
209		398	
	425	101	
49			371

Magic Sum =
1000.
Calculator
Time?

0		12	0
4			
			12

Use only
4's, 8's, 12's, 0's
Magic Sum = 24

Complete both Magic Squares using 0-9 on each.

		5	
	8		6
	5		7
		8	

Magic
Total
21

15			12
	10		
			11
	13	14	

Magic
Sum =
30

$$\triangle + \triangle = 20$$

$$\triangle + \square = 30$$

$$\square + \square + \square = ?$$

$$* + * + * = 900$$

$$* + * + \bigcirc = 1000$$

$$\bigcirc + \cup = ?$$

▲	○	▲	= 17
---	---	---	------

□	□	□	= 27
---	---	---	------

□	▲	▲	= ?
---	---	---	-----

○	○	□	= 41
---	---	---	------

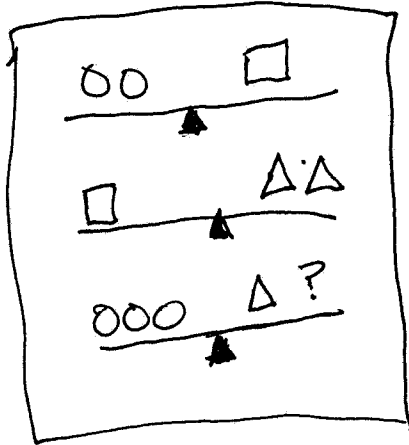
*	▲	○	□	= ?
---	---	---	---	-----

▲	*	▲	▲	= 168
---	---	---	---	-------

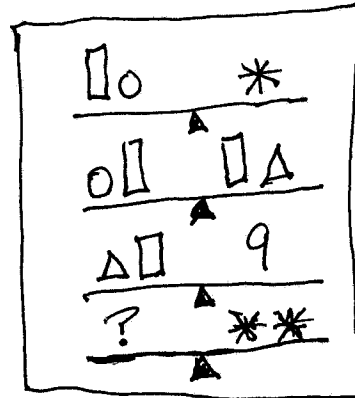
*	*	*	*	= 174
---	---	---	---	-------

○	*	□	*	= 100
---	---	---	---	-------

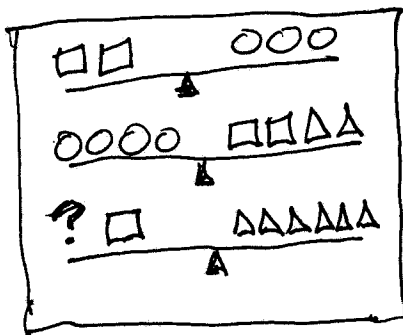
Balance Problem (always equal)



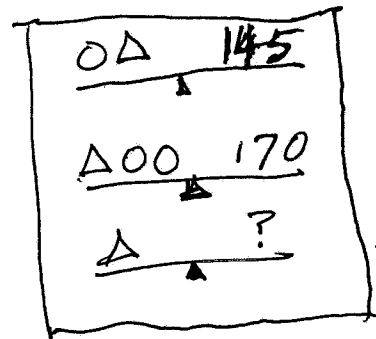
What shape(s)
will balance
the last scale?



What number
will balance
the last scale?



What shape(s)
will balance
the last scale?



What number
will balance
the last scale?

IN/OUT PROBLEMS (FUNCTIONS)

in	3	10	500	?
out	6	20	1000	90

Can you find
the rule for
each puzzle?

in	7	30	9	?
out	15	61	19	99

in	10	6	8	?
out	29	17	23	32

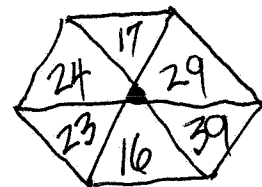
What do you do
to the "in" to
become the "out"?

in	1	7	49	?
out	4	16	100	3



Can you throw
6 darts to
total 100?

You may
repeat
numbers



How many
darts to
make 100?

What Comes Next?

- (a) 1, 5, 10, 16, 23, —, — (b) 1, 6, 2, 7, 3, 8, —, —
 (c) 100, 90, 81, 73, —, — (d) 1, 4, 9, 16, 25, —, —
 (e) 250, 240, 260, 230, 270, — (f) —, $1\frac{1}{2}$, $2\frac{1}{2}$, $4\frac{1}{2}$, $7\frac{1}{2}$, —
 (g) Half dollar, quarter, nickel, —, — (h) Anna, Rob, Mac, Ted, —
 (i) S, M, T, W, T, — — ^{think time} (j) J, F, M, A, M, —
 (k) ^{BONUS} —, O, T, T, F, F, S, S, — — (l) 8, 5, 4, 1, 9, 7, 6, 3, —, —
 ↖ think numbers ↗



2 orange, 2 red, 1 blue, 1 yellow

The orange blocks are in-between reds.
 The yellow touches just 1 orange.
 The blue touches red but not orange.
 Color in the blocks in correct order.



2 orange, 2 red, 1 blue, 1 green, 1 yellow

Green does not touch red or blue.
 Neither end is orange.
 Blue does not touch red or orange.
 Color in the correct order

More Logic

- (a) A chemist, holding up a jar of blue liquid, says "This acid is so powerful it will eat through anything". No one believed her. Why?
- (b) — years ago, Margo was 7 years old because last year she was — years old and next year she will be — years old. In — years she will be 23. Use 10, 14, 12, 6 to make this true.

In this game of Tic-Tac-Toe, 3 in a row LOSES!

- (c) You are "o" and it's your turn. What do you do to be certain you will win?

X	X	O
O		
	X	

- (d) Writing the numbers 0-100, how many 9's will you write? ^{Be careful!}

- (e) Ellen is twice as old as Joseph. Next year she will be 31 years older. How old is she now?

- (f) 1, —, 1000 What number is in the exact middle? (not 500!)

- (g) Take $\frac{1}{3}$ of me and you end up with $\frac{2}{3}$. Who am I? (number)

- (h) Take $\frac{3}{4}$ of me and you'll have a dozen and a half. Who am I?

- (i) 0, —, —, $\frac{1}{2}$, — Fill in the blanks. Will either $\frac{1}{3}$ or $\frac{2}{3}$ work?

- (j) What 2 digit number is 3 times the sum of its digits?

- (k) If A = 1¢, B = 2¢, C = 3¢, ... Z = 26¢ can you find a \$1.00 word?

A farmer wants to cross a river. He has a dog, 2 geese, 3 bags of corn. The dog will eat the geese and the geese will eat the corn if left alone. If the farmer is with them, no one eats anything. The boat can carry the farmer and 2 things only. How can he get all 6 things across?
(hint: many trips)