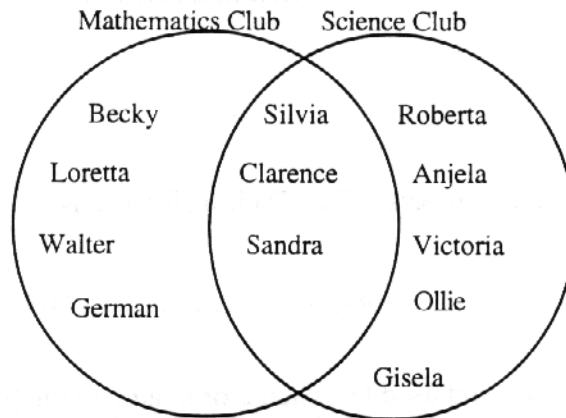


SUNSHINE MATH - 4
Jupiter, I

Name: _____
(This shows my own thinking.)

- ★★★★ 1. The students in Mr. Renick's 4th grade class started a mathematics club and a science club. They drew a Venn diagram to show which students were in each club. Use the Venn diagram below to answer the questions about the clubs.



- (a) How many students were in the mathematics club? _____
(b) How many students were in the science club? _____
(c) How many students were in both clubs? _____
(d) If one-half of Mr. Renick's class is in either the math club or the science club or both clubs, what is the total number of students in Mr. Renick's class? _____

- ★★ 2. How many right angles are in this picture of intersecting square frames, including the background?



Answer: _____ right angles

- ★ 3. If the 7th day of a month is on Friday, on what day is the 24th day of the same month?

Answer: _____

- ★★★★ 4. Think about the following list of number pairs. Three is the first number of a pair, and 8 is the second.

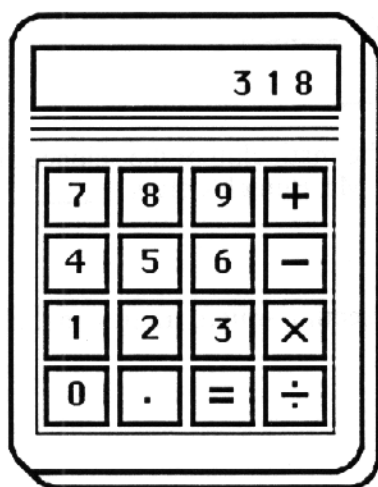
3	→	8
4	→	11
5	→	14
6	→	17
	→	
	→	
10	→	29
	→	
	→	
	→	

- a. If 50 is the first number, what is the second number? _____
- b. If 200 is the first number, what is the second number? _____
- c. If 89 is the second number, what is the first number? _____
- d. If a number n is the first number, what is the second number? _____

- ★★ 5. The sum of two whole numbers is 72. Their difference is 48. What are the two numbers?

Answer: _____ and _____

- ★ 6. Henry was at the store, and used his calculator to add up the price for 2 loaves of bread. He got the number shown in the display, but didn't know exactly how much money that was. How much money would those two loaves cost? Circle the correct answer below.



- a. \$318
- b. 3.18¢
- c. \$318.00
- d. \$3.18

- ★★ 7. In your class, 9 students received an "excellent" on a recent project. Your teacher would like to buy pencils for those 9 students. The school store sells them for 10 cents each or 3 for 25 cents. What is the least amount of money your teacher will have to spend in order to buy one pencil for each of the 9 students?

Answer: _____ cents

SUNSHINE MATH - 4

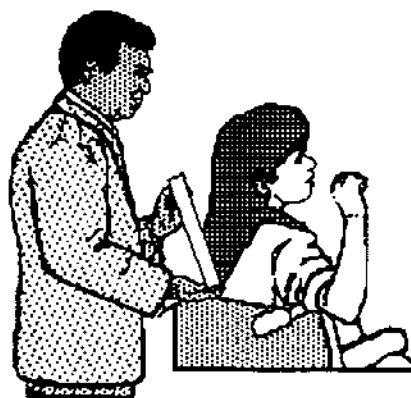
Jupiter, II

Name: _____

(This shows my own thinking.)

- ★★ 1. Hair grows about $\frac{1}{2}$ inch each month. After you shave your head, how many years will it be until your hair is 1 foot in length?

Answer: _____ years



- ★★ 2. Robert received a weekly allowance of \$6 on Monday. He put 50% of his money in his empty piggy bank, but then took out 50% of that money to go to a movie. How much money was left in the piggy bank?

Answer: \$_____

- ★ 3. An arcade video game had a code built in. In order to play the game Tamika had to find the missing numbers. Help her by filling in the pattern below.

113, _____, 95, 86, 77, _____, 59, _____, 41, 32, 23, 14, 5.

- ★★★ 4. Sabrina used a calculator and started adding the whole numbers in order:

$$1 + 2 + 3 + 4 + 5 + \dots$$



What is the last number she would add that would get the sum on her calculator over 1,000?

Answer: _____

- ★★ 5. Marcus, Aaron, and Jason went to a double feature movie. The show began at 1:45 pm and lasted for 4 hours and 27 minutes. At what time did the show end?

Answer: _____

- ★ 6. Maria, Colleen, Patsy, and Kenya are 8, 9, 10, and 11 years old.

Maria is older than Patsy and younger than Kenya.

Colleen is younger than Marie and older than Patsy.

What is each girl's age?

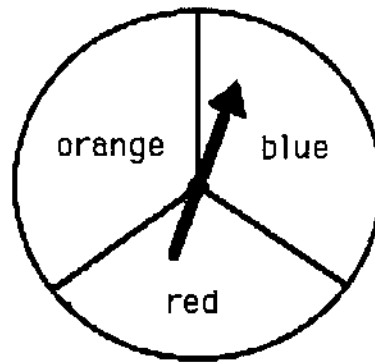
Answers: Maria: _____ years old.

Patsy: _____ years old

Colleen: _____ years old

Kenya: _____ years old

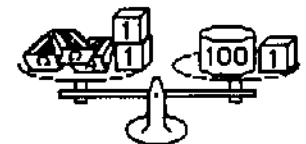
- ★★★★ 7. On a game board, landing on blue means to move ahead 1 space, landing on red means to move ahead 2 spaces, and landing on orange means to move back 1 space. If you took 30 spins, about where would you expect to be on the game board, relative to where you started?



Answer: I would be about _____ spaces _____
(ahead or behind)

- ★★★ 8. Margarit liked to balance things. She balanced 3 pencil sharpeners and 2 one-gram blocks with a 100-gram weight and another one-gram block. She let x stand for the weight of one pencil sharpener, and she claimed that $x = 30$ grams. Was she correct? If not, how much did each pencil sharpener weigh?

Answer: _____



SUNSHINE MATH - 4

Jupiter, III

Name: _____

(This shows my own thinking.)

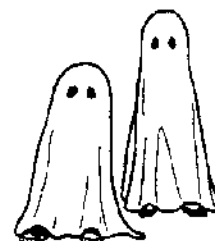
- ★★ 1. After filling in the multiplication table below, Parker noticed some number patterns. Fill in the chart and follow the directions beneath it.

×	1	2	3	4	5	6	7	8	9	10
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										

Draw a circle around the line of numbers that has only *square numbers* in it.

- ★★★ 2. Mr. Jackson is preparing bags of treats to give trick or treaters on Halloween. He has 48 pieces of candy and 60 pieces of gum. He uses all the candy and gum, and he puts the same ratio of candy to gum in each bag. What is the largest number of bags he could have made?

Answer: _____



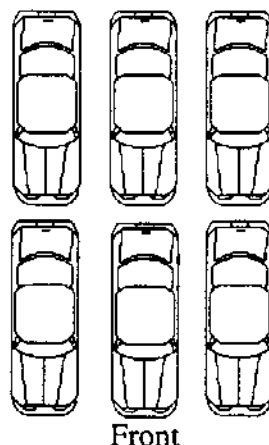
- ★ 3. It is now 10:45. What time will it be in 2 hours and 15 minutes?

Answer: _____

- ★★ 4. Six cars are parked in front of a local car dealers lot.
You are looking at the cars from the front.

- The red car is parked in front of the green car.
- The black car is between the green car and yellow car.
- The blue car is parked on the right side of the red car.
- The orange car is parked in front of the yellow car.

Color the cars to show how they are parked, or write the name of the color on each car.



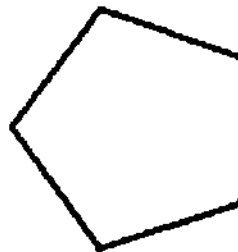
- ★ 5. Susan made \$15.00 baby-sitting. She spent \$11.15 on a birthday present, including tax.
To the nearest dollar, how much does she have left ?

Answer: _____

- ★★★★ 6. The Disney Golf Classic starts with 64 golfers. The golfers form pairs and each pair plays a match. The losers drop out and the winners of each pair then form new pairs and play again. Then those winners form pairs and play. This continues until there is one winner.

- a. In how many matches must the winner play? _____
- b. How many matches are played by all the golfers, to determine the winner? _____

- ★★★ 7. Draw all the lines of symmetry for this polygon.



- ★★★ 8. A number has 4 digits.
No digits in the number are repeated.
The digit in the tens place is three times the digit in the thousands place.
The number is odd.
The sum of the digits in the number is 27.

What is the number?

Answer: _____

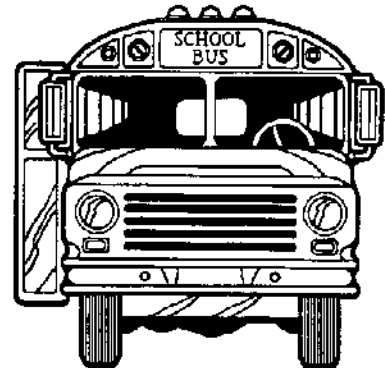
SUNSHINE MATH - 4

Jupiter, IV

Name: _____

(This shows my own thinking.)

- ★★ 1. A school bus makes 7 stops on its trip to school and 7 stops on the trip home.
- a. How many stops will the bus make in one full week of school? _____
- b. How many stops will the bus make in the 180-day school year? _____

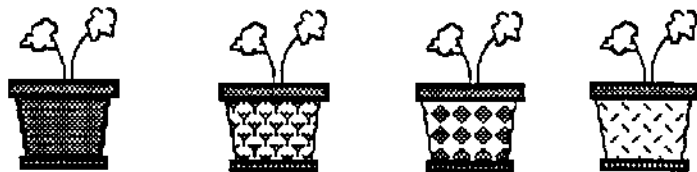


- ★ 2. When Michelle woke up yesterday, the temperature was 72°F . By lunch time, the temperature had risen 15°F . By dinner time, it had fallen 22°F . What was the temperature at dinner time?

Answer: _____ $^{\circ}\text{F}$

- ★★★ 3. Teresa has 4 flower pots in 4 different designs. She likes to display her flower pots in different positions on her window sill. How many different ways can she place her flower pots?

Answer: _____ ways



- ★★ 4. What is the mystery number x ?

- x has 3 digits.
- The tens digit is half the hundreds digits.
- The number is odd.
- The sum of the digits is 9.

Answer: $x =$ _____

- ★ 5. If the 7th day of the month is on a Tuesday, on what day is the 25th?

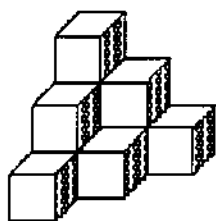
Answer: _____

- ★★★ 6. On the average your heart beats about 72 times per minute. At this rate, about how many times will it beat:

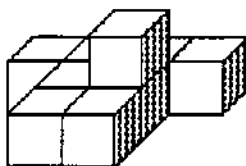
- a. in a 30-day month? _____
 b. in a year? _____
 c. in your lifetime, if you live to 72 years of age? _____



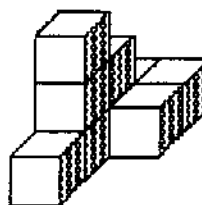
- ★★★ 7. The volume of a shape is the number of cubes it will take, all the same size, to make the figure. Each figure is made of stacks of cubes that are 1 centimeter on each side. Find the volume of the figures below.



a.



b.

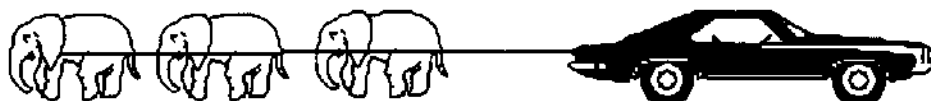


c.

Answer: a. _____ cm^3 Answer: b. _____ cm^3 Answer: c. _____ cm^3

- ★★★ 8. In a tug of war, 5 donkeys are exactly equal to 2 elephants. In another tug of war, 3 elephants are equal to 1 car. Which team should win if a car and 3 donkeys are matched against 4 elephants?

Answer: _____



SUNSHINE MATH - 4

Jupiter, V

Name: _____

(This shows my own thinking.)

- ★★★★ 1. A normal person blinks about 25 times per minute when awake.

- How old will you be on your next birthday?
- To the nearest million, how many times will you have blinked on your next birthday? Assume you sleep 8 hours each day.

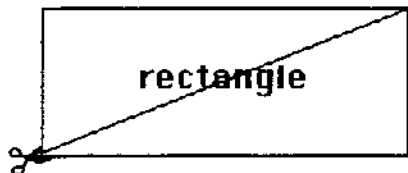


Answers: (a) _____ (b) _____

- ★★ 2. Pablo has \$3.15 in dimes and quarters. He has more quarters than dimes. How many quarters and dimes does he have?

Answer: _____ quarters and _____ dimes

- ★★★★ 3. Use a centimeter ruler and a separate sheet of paper to draw an 8 cm. by 6 cm. rectangle. List its perimeter on the table below. Then cut out the rectangle and also cut along the diagonal as shown in the picture below. Use your two pieces to create 4 new geometric shapes. After making each shape, determine its perimeter. Below list the names of the shapes made and their perimeters.



SHAPE	PERIMETER
rectangle	_____
_____	_____
_____	_____
_____	_____
_____	_____

- ★ 4. Fill in the missing digits:

$$\begin{array}{r}
 4 \square 6 8 \\
 5 \square 6 \\
 + \square 9 4 \square \\
 \hline
 1 \ 1, \ 1 \ 1 \ 1
 \end{array}$$

- ★ 5. *Century* is to *decade* as *dollar* is to: (a) penny (b) nickel (c) dime (d) quarter

Answer: _____

- ★★ 6. Roberto ate 3 pieces of a pizza and then felt that he should pay $\frac{1}{4}$ of the cost because that's the fraction he ate. How many pieces was the pizza cut into?

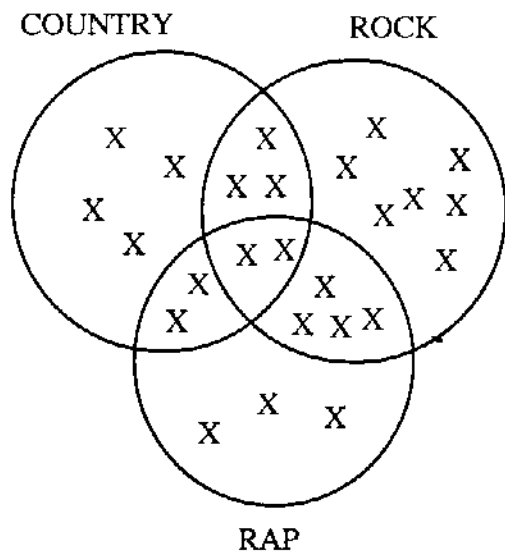
Answer: _____ pieces

- ★★★ 7. Thomas is playing tic-tac-toe with a computer. It is the computer's turn to place an "X" on the board. If the computer makes its moves at random in the open spaces, what is the chance it will win on this move?

Answer: _____



- ★★★★ 8. Answer the questions below using the Venn Diagram showing Ms. Berger's students musical preferences.



CLASS CENSUS

How many students took part in the all class census?

How many students prefer only rap?

How many students prefer only rock and country?

How many students prefer rap or country but not rock?

SUNSHINE MATH - 4
Jupiter, VI

Name: _____

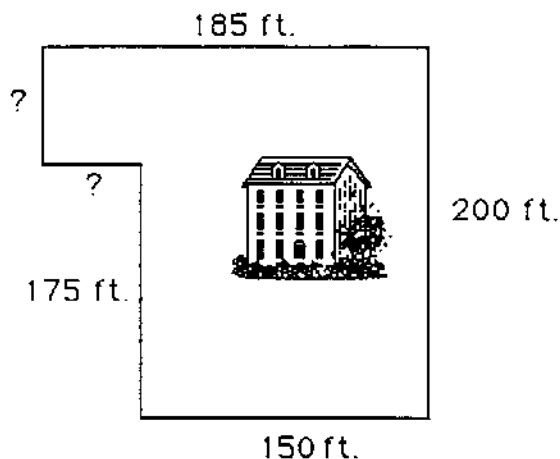
(This shows my own thinking.)

- ★★ 1. Jean went on a vacation with her parents in their family car. They left their home in Florida on Monday at 7:15 a.m. and arrived in North Carolina on Tuesday at 11:45 a.m. How long was their trip?

Answer: _____ hours and _____ minutes

- ★★★ 2. Mr. Brown wanted to put up a fence around his property. How many feet of fencing did he need? The lawn is outlined to the right, but the picture is not drawn to scale.

Answer: _____ feet



- ★★★ 3. Find the next number in the patterns below.

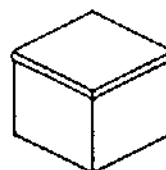
(a.) \$32.10 → \$32.30 → \$32.50 → \$32.70 → \$32.90 → \$_____

(b.) 720 → 360 → 180 → 90 → _____

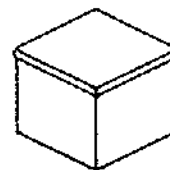
(c.) $\frac{1}{2} \rightarrow \frac{1}{4} \rightarrow \frac{1}{8} \rightarrow \frac{1}{16} \rightarrow$ _____

- ★★★★ 4. Box A has 3 red marbles and 2 yellow marbles. Box B has 2 red marbles and 1 yellow marble. If you have to pick a red marble to win a prize and you can not look in the box, which box would give you the best chance of winning the prize?

Answer: _____

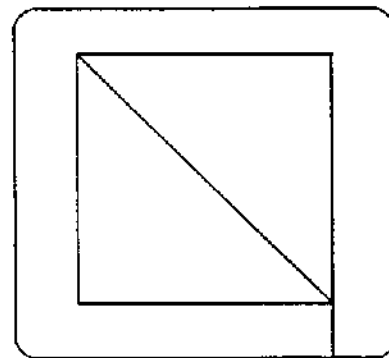


A



B

- ★★ 5. You can trace over this figure with a pencil without retracing any path, if you start in the right place. Find the two places where you can do this, and draw circles around them.



- ★ 6. If 5 is added to a number n and the answer is multiplied by 2, the result will be 24. What is the number n ?

Answer: $n = \underline{\hspace{2cm}}$

- ★★★ 7. Estimate the answers below. Circle the best choice.

a. $3\frac{10}{11} + 2\frac{1}{101}$

Choose: 4 or 5 or 6 or 7

b. $5\frac{2}{47} - 2\frac{1}{35}$

Choose: 2 or 3 or 4 or 5

c. $6\frac{17}{19} \times 7\frac{3}{290}$

Choose: 42 or 49 or 63 or 213

- ★★★ 8. You need $\frac{1}{2}$ cup of sugar to make a three-layer cake. How much sugar would you need for a one-layer cake?

Answer: $\underline{\hspace{2cm}}$



- ★ 9. What is the product of the ten one-digit numbers?

Answer: $\underline{\hspace{2cm}}$

SUNSHINE MATH - 4

Jupiter, VII

Name: _____

(This shows my own thinking.)

- ★★★★ 1. One green, one red, and one blue marble are placed in a bag. The days of the week are written on seven pieces of paper and put in another bag. You can draw from either bag for a \$1 million prize. To win, you must either draw a weekend day -- Saturday or Sunday -- or a blue marble. Which bag gives you the best chance of winning, the marble bag or the day-of-the-week bag?



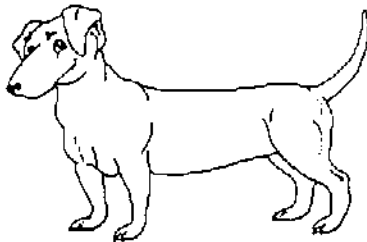
Answer: _____

- ★ 2. One disposable diaper will stay in a landfill, without decomposing, for 2000 years. If you put 4 disposable diapers into a landfill tomorrow, how long will it be before they are all decomposed?

Answer: _____ years



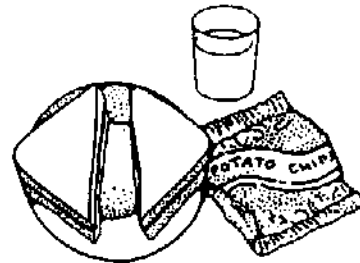
- ★★★ 3. Faye has 20 feet of fencing to make a rectangular pen for her dog. What is the largest area that she can fence in?



Answer: _____ square feet

- ★★ 4. Herman's lunch came to \$4.27, and he gave the clerk \$5.02. Why did he give the clerk two extra pennies?

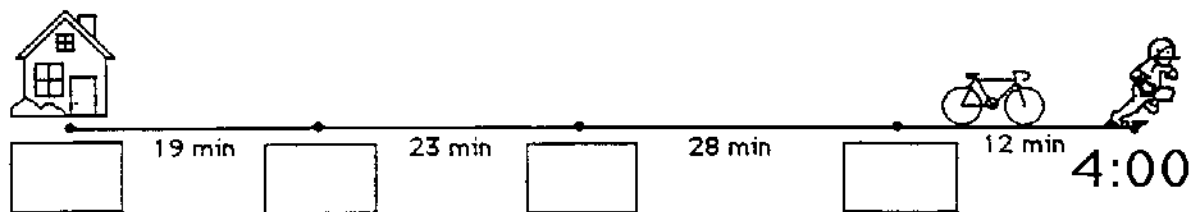
Answer: _____



- ★★★ 5. Juan's age is 3 times Derrick's age, and Tyrone is twice as old as Derrick. The sum of their ages is 30. How old is each boy?

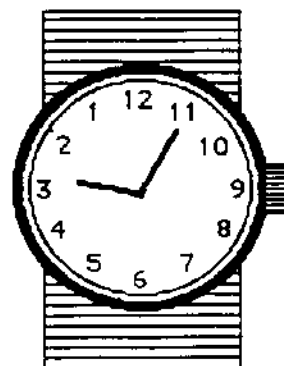
Answers: Juan is _____; Derrick is _____; Tyrone is _____

- ★★ 6. Maurice and his 3 friends ride their bikes to football practice each afternoon after school. Maurice leaves his house and goes to each friend's house, and they travel on together. He has timed each part of the trip. Practice starts at 4:00 sharp. Write in each box below when Maurice should arrive, so they won't be late for practice. Also write in the time he should leave his own house.



- ★★ 7. This watch is unusual -- it runs *counterclockwise*. What time will it be 4 hours and 45 minutes from the time shown?

For your answer, draw the hour and minute hands where they should be on this watch.



- ★★ 8. An adult has about 5 quarts of blood. When they donate a pint for a sick friend, what fraction of their blood do they give away?

Answer: _____

- ★★ 9. The human body is about 70% water, by weight.

a. How many pounds do you weigh? _____ pounds

b. How many pounds of you is water? _____ pounds

SUNSHINE MATH - 4

Jupiter, VIII

Name: _____

(This shows my own thinking.)

- ★★ 1. What number is as much greater than 36 as it is less than 94?

Answer: _____

- ★★★ 2. Find a pair of numbers for each sum and product. Write your answers in the blanks.

	<u>Numbers</u>	<u>Sum</u>	<u>Product</u>
Example →	5 , 3	8	15
	____ , ____	10	24
	____ , ____	12	20
	____ , ____	14	48
↘	____ , ____	16	63
	____ , ____	18	45
	____ , ____	31	30

- ★★★ 3. Ashley, Jonathan, Sarah, Carlos, and Tanya all made the finals of the National Math Fair Competition last year. Before the final round began, each one had to shake hands with all the others. How many handshakes were there?

Answer: _____ handshakes



- ★★ 4. Karen's first five grades are: 92, 88, 99, 97, and 89. If she has an average of 94, she'll get an A on her report card. Find Karen's average. Will Karen get an A or a B?

Answer: Karen will get a(n) _____.

- ★ 5. Find the missing digits. Write the completed problem below to the right.

$$\begin{array}{r}
 5 \square, 682 \\
 - 43, 8\square6 \\
 \hline
 6, 786
 \end{array}$$

Answer: _____

- ★ 6. On the Fourth of July, a typical temperature in Florida during the day would be:

a. 12°C b. 120°F c. 36°C

Answer: _____

- ★★ 7. Rachel mailed out 12 party invitations and the stamps cost \$0.32 each. She paid for her stamps with a five dollar bill. How much change should she receive?

Answer: _____



- ★★★★ 8. In these addends, each letter represents a single digit. Find the numbers. Write the completed problem below, on the right hand side.

$$\begin{array}{r}
 \text{C E N T} \\
 \text{C E N T} \\
 + \text{S C E N T} \\
 \hline
 35128
 \end{array}$$

Answer: _____

- ★★ 9. To change "dog years" to "people years," you multiply the dog's age by 7.

- a. How old, in people years, is a 10-year old dog? _____
- b. How old are you? _____ How old a dog is equal to you in age? _____

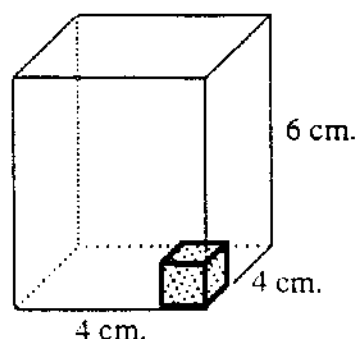


SUNSHINE MATH - 4
Jupiter, IX

Name: _____
(This shows my own thinking.)

- ★★ 1. The *volume* of a box is the number of cubes it would take to fill it up. If each cube is a centimeter on the edges, the volume would be given in *cubic centimeters*. What is the volume of the 4 cm x 4 cm x 6 cm box to the right?

Answer: _____ cubic centimeters

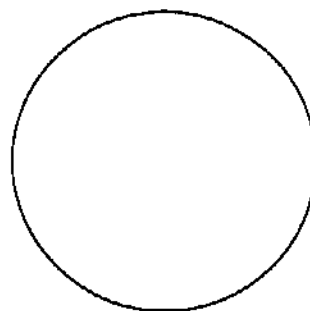


- ★★★ 2. Mario got his \$10.00 weekly allowance on Monday. He spent 25% of his weekly allowance on Tuesday, 15% of his weekly allowance on Wednesday, and 10% more on Thursday. How much money did he have left to spend for the rest of the week?

Answer: _____

- ★★ 3. Shade in $\frac{3}{4}$ of $\frac{1}{2}$ of $\frac{1}{2}$ of the circle. What fraction of the circle is shaded?

Answer: _____ is shaded



- ★★★★ 4. How many outfit combinations are possible with 1 pair of sneakers, 3 tee-shirts and 2 pairs of jeans? Drawing a diagram might help to illustrate your strategy.

DIAGRAM:

Answer: _____ outfits are possible

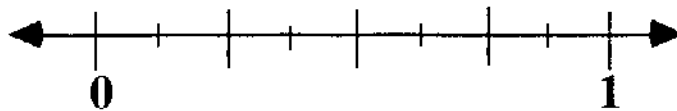
- ★★★ 5. Sonya has x amount of money. Bob has three times as much as Sonya has, less \$14.62. Write an expression, using x , that tells how much does Bob has.

Answer: \$ _____

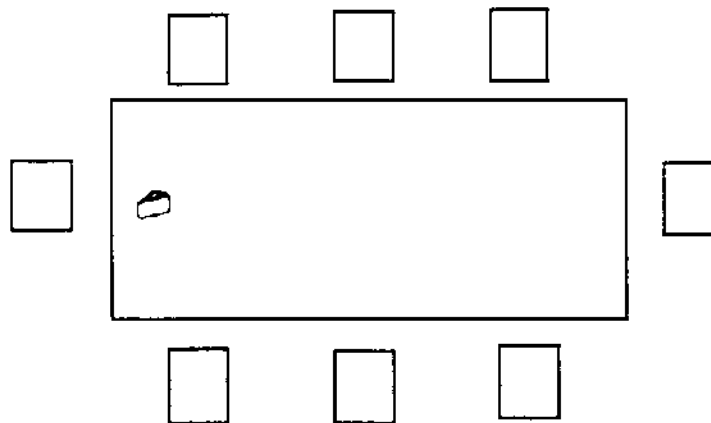
- ★ 6. Mr. Harmen graded 56 papers Monday and 87 papers Wednesday. How many papers did Mr. Harmen grade in the two days?

Answer: _____

- ★ 7. Place the letter X on the number line where $\frac{5}{8}$ would be.



- ★★ 8. Use logic and the clues given to find out who will be sitting in what chair at the Halloween party. Fill each chair with the character's initial.



CLUES

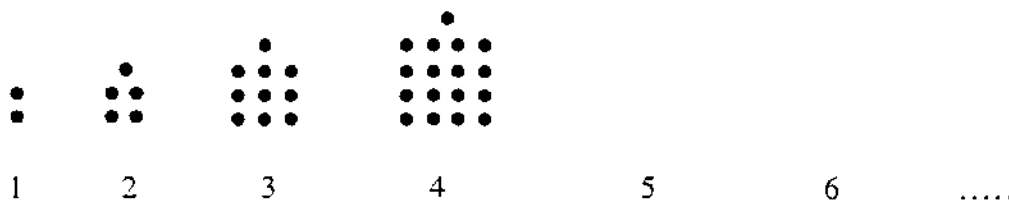
The Jack-o-lantern sits on the Ghost's immediate right.
 Sleeping Beauty sits across from the Prince.
 The Witch is to the right of Sleeping Beauty.
 The Prince sits between the Jack-o-lantern and the Fireman.
 The Ghost sits at the head of the table with the wedge of cheese.
 The Clown sits to the left of the Robot.

SUNSHINE MATH - 4

Jupiter, X

Name: _____
(This shows my own thinking.)

- ★★ 1. Draw the fifth and sixth figures to follow the pattern of dots below.



- ★★★ 2. Answer these questions about the pattern in problem 1 above.

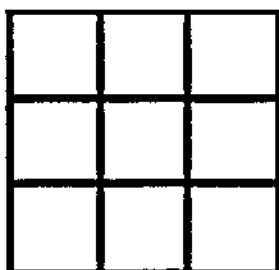
- How many dots would it take to make the 10th figure in the pattern? _____
- What is the number of the figure that is made with 401 dots? _____
- Let n stand for any figure number. Use n to tell how many dots there would be in the n th figure. _____

- ★★ 3. Margo's dog had a litter of 7 pups, all alike except for coloring. The mother and one pup weighed 15 pounds. The mother and two pups weighed 17 pounds. How much did the litter of 7 pups weigh by themselves?

Answer: _____ pounds



- ★★★★ 4. In a Magic Square, the sums of the columns, rows and diagonals are all the same. Using the digits 1-9 only once, fill in the blanks to make this figure a magic square with a sum of 15.



- ★ 5. Back in the old days, couples would enter marathon dance contests to win money. They would dance continuously, with only short breaks for food and drink. Some contests would go on for over a week. How many hours of dancing would there be in a 7-day week?

Answer: _____ hours



- ★★★ 6. Mr. Trumpet would like to offer you a job. He will hire you for ten days. He will pay you one of three ways:
- a. \$1.00 the first day, \$2.00 the second day, \$3.00 the third day and so on.
 - b. 10¢ the first day, 20¢ the second day, 40¢ the third day, and each day twice the amount of the day before.
 - c. \$6.00 each day for all ten days.

Which way would pay you the most money?

Answer: _____

- ★ 7. How many gallon jugs would you need to hold 3 and $\frac{3}{4}$ gallons of lemonade?

Answer: _____ jugs

- ★★★★ 8. Your Mom is a sporting person, so when it's close to your bedtime, she will have a contest with you to see if you get to stay up an extra half-hour to play a computer game. You get to draw a card from a well-shuffled deck. If you draw a face card, an ace, or any heart, she'll "have a heart" and let you stay up. If you draw any other card, you lose and go ahead to bed. Who has the best chance of winning, you or your Mom?

Answer: _____



SUNSHINE MATH - 4

Jupiter, XI

Name: _____
(This shows my own thinking.)

- ★★ 1. The corner of this paper measures 90 degrees. Fold the lower right-hand corner of this paper so it represents two 45 degree angles. Trace the fold line with your pencil.

- ★★ 2. Estimate the result of the following problem as a whole number.

$$4\frac{1}{43} + 2\frac{15}{16} - 1\frac{24}{26} + 5\frac{11}{12} - 3\frac{3}{61}$$

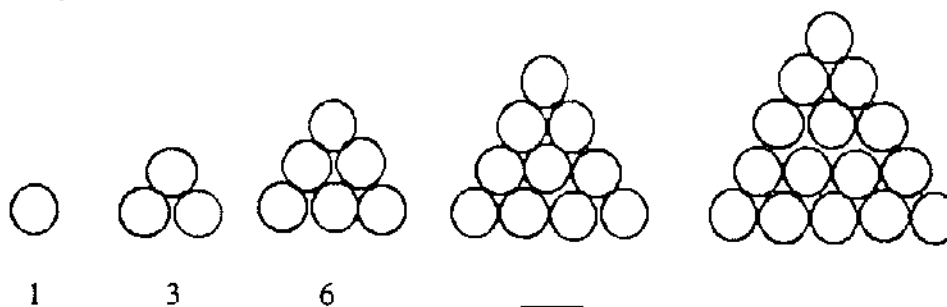
Answer: _____

- ★★★ 3. How many ways can 3 students be arranged in three chairs?

Answer: _____ ways



- ★★ 4. Observe the circles in the triangle-shaped stacks. Fill in the missing numbers to show how many circles are in the last two stacks.



- ★★ 5. Draw the next figure in the above pattern.

- ★★★ 6. In the pattern for problem 4, how many circles would be in the 10th figure?

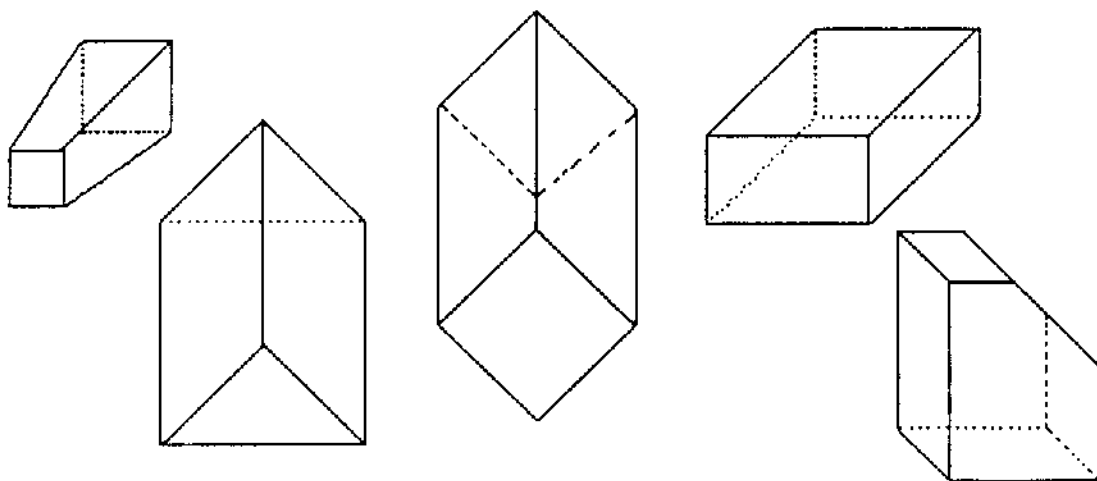
Answer: _____

- ★★★ 7. The Florida Lottery is made up of the numbers 1 - 49. My mother has observed that the winning numbers many times are prime numbers.
- List the prime numbers from 1 - 49: _____
 - What is the probability of a prime number being picked randomly from the numbers 1 - 49? _____
 - Is the probability of picking a prime number greater than picking a number that is not prime? _____

- ★★★ 8. Put $<$, $>$, or $=$ in each blank below, to give true statements.

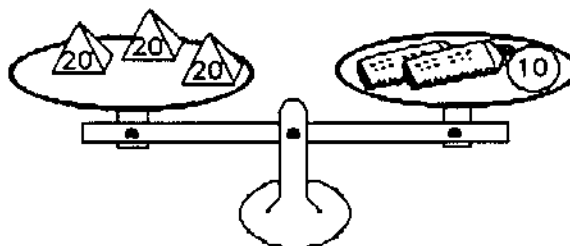
(a) 3030 _____ 3300 (b) $(345 + 253)$ _____ 600 (c) 1.09 _____ 1.090

- ★★★ 9. Circle the following solid figures that have at least one square face.



- ★★ 10. Lu Win likes to balance things. She balanced three 20-gram weights with a 10-gram weight and two new tubes of glue. How much did each tube of glue weigh?

Answer: _____ grams



SUNSHINE MATH - 4

Jupiter, XII

Name: _____

(This shows my own thinking.)

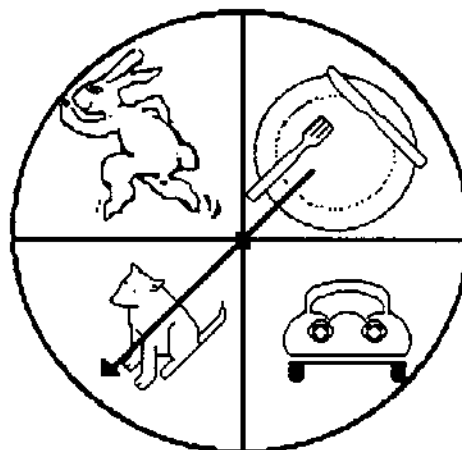
- ★★★ 1. A snail climbs up a wall 20 feet high. Each day the snail climbs 5 feet, but each night it slips backwards 4 feet. How many days will it take for the snail to get to the top of the wall?

Answer: _____ days

- ★★ 2. Raoul got to spin this spinner, to see what chore he had to do Saturday mornings. He could wash the dishes, wash the car, wash the dog, or change the paper in the rabbit cage. What is the chance he will have to wash something Saturday morning, as a fraction and as a percent?

Answers: fraction: _____

percent: _____



- ★ 3. A costume shop had a special sale. Bob got his clown costume for $\frac{1}{2}$ off the marked price of \$25. How much did the costume cost?

Answer: _____



- ★ 4. If today was October 11th, how many days would be left in the current year?

Answer: _____ days

- ★★★ 5. What number Am I ?

I am a three-digit number.
I am less than 200.
I am divisible by 12, and by 9.
My units digit is less than my tens digit.

Answer: _____

- ★★★ 6. Suppose that humans walk about 10,000 steps per day, on average.

- Your average step is probably about 18 inches.
If so, how many *inches* per day do you walk? _____
- How many *feet* per day do you walk? _____
- How many *miles* per day do you walk, to the nearest whole mile? _____



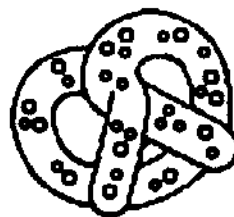
- ★★ 7. If you tend to be one of those people who taps their foot, picks their nails, drums their fingers, or moves around in their seat, there may be some good news. Although your fidgeting may be annoying to others, researchers at the National Institute of Health reports that one of these habits can burn as much as 800 calories per day. If you want to lose weight, this might help.

For someone who fidgets as above, how many calories per hour are burned up? Assume the person sleeps 8 hours per day, and doesn't fidget while asleep.

Answer: _____

- ★★★ 8. It costs Mr Kringle \$10 to make 100 giant pretzels for his bakery. If he sells his pretzels for 25¢ each, how much profit will he make after selling all 100 pretzels?

Answer: \$_____ profit



SUNSHINE MATH - 4

Jupiter, XIII

Name: _____

(This shows my own thinking.)

- ★★★★ 1. To win \$1 million, you must draw two cards whose sum is nine, from a stack of cards numbered 1 through 10. After the first draw, you replace the card and shuffle the stack again for the second draw. What is the chance that your two cards will have a sum of nine?

Use the chart if it helps you think about the possibilities.

Answer: _____

		first card									
second card		1	2	3	4	5	6	7	8	9	10
	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
	9										
	10										

- ★ 2. Joey agreed to help his mom with the summer chores for \$1.50 a day for 20 days. Susan agreed to water the neighbor's indoor plants and feed the cat while they were on summer vacation for \$5.00 a week for 5 weeks. Who made more money over their summer vacation,

Joey or Susan?

Answer: _____

- ★★ 3. It's time to plant a spring vegetable garden. $\frac{1}{3}$ will be root plants, $\frac{1}{3}$ will be stalk plants, and $\frac{1}{3}$ will be vine plants. $\frac{1}{2}$ of the stalk and vine plants will be grown organically without fertilizer. What fraction of the garden will be grown organically? Fill in the rectangle to show how the garden can be set up.



Answer: ____ will be grown organically.

- ★ 4. Juanita has 35 pre-addressed post cards she plans to hand out to her friends so they will write to her while she is away visiting her grandmother. She has 7 friends she'd like to give them to. Write a number sentence to show how Juanita can share her cards equally among her friends.

Answer: _____

- ★★ 5. Mary Jane called UPS to find a cost estimate for shipping her racing bicycle from Florida to her sister's house in Vermont.



- a. The first information requested by the UPS agent was for the dimensions of the bike. Circle the most reasonable answer.

- (a) 14 inches by 6 inches (b) 14 feet by 6 feet
(c) 5 feet by 4 feet (d) 5 yards by 3 yards

- b. The second question the agent asked was the approximate weight of the racing bike. Circle the most reasonable answer.

- (a) 300 grams (b) 15 kilograms (c) 1 metric ton (d) 225 kilograms

- ★★★ 6. Felicia collected data from her classmates using a tally sheet. She asked each student what types of electronic appliances they had at home. Below is the data Felicia collected and recorded on a pictograph. Answer the questions related to the graph.

- (a) How many different types of appliances are listed? _____
(b) What is the total number of all electronic appliances listed? _____
(c) According to the data collected, what are the three most popular electronic appliances?

Answer: _____, _____, _____

ELECTRONIC APPLIANCES AT HOME

ITEM	NUMBER FOUND
Hairdryer	☺☺☺
Television	☺☺☺☺
Washing Machine	☺☺☺
Computer	☺
Food Processor	☺
Clock Radio	☺☺
Stereo	☺☺☺
Walkman	☺☺☺☺
Lamps	☺☺☺☺☺

☺ = 4 APPLIANCES

- ★★ 7. Write in the three missing numbers in the pattern.

....., _____, _____, 171, 162, 153, 144, 135, 126, _____,

SUNSHINE MATH - 4

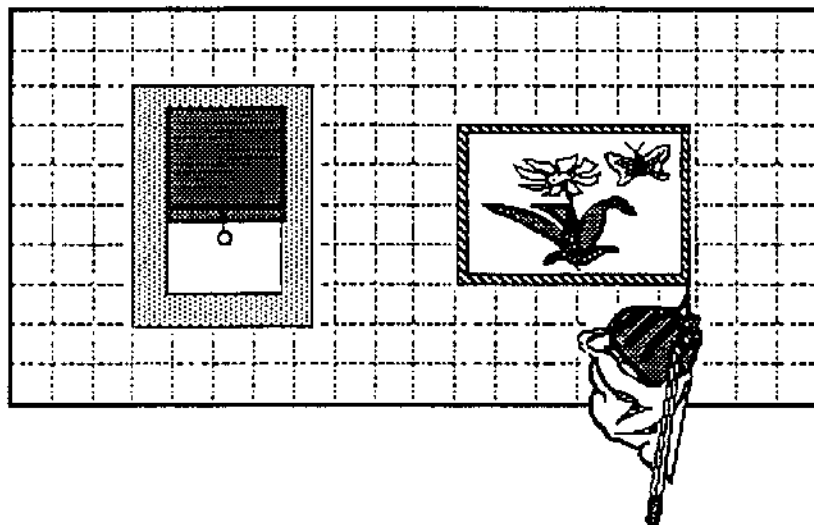
Jupiter, XIV

Name: _____

(This shows my own thinking.)

- ★★ 1. Charles likes to draw and thinks he will become an architect one day. He is always concerned about the size of the objects he draws. Charles said the areas of the window and picture below were about 27 square units and $23\frac{1}{5}$ square units, respectively. Was he correct? Why or why not?

Answer: _____



- ★★★ 2. Farmer Brown had some animals. One-fourth were horses, one-half were cows, and the rest were pigs. He had 8 pigs. How many animals did he have altogether?

Answer: _____

- ★★★ 3. To change a Fahrenheit temperature to a Celsius temperature, follow these steps:

- Subtract 32 from the Fahrenheit temperature.
- Divide by 9.
- Multiply by 5.

Use the steps to write the Celsius temperature for each of these Fahrenheit readings:

a. 59°F is _____ $^{\circ}\text{C}$

b. 86°F is _____ $^{\circ}\text{C}$

c. 122°F is _____ $^{\circ}\text{C}$

- ★★ 4. Marilyn used the steps above, and got a Celsius temperature of 60° . What was the Fahrenheit temperature she started with? _____

- ★ 5. How much is this stack of quarters worth?

Answer: _____

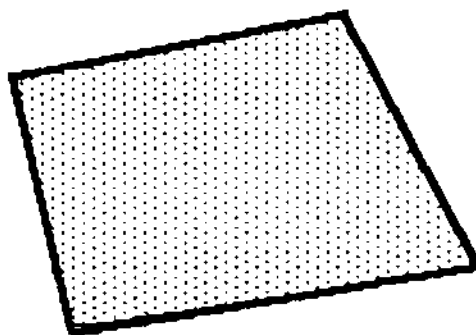


- ★★ 6. The Adams family wants to take a trip to Disneyworld, but can't decide what month to go. They decide to write the names of the months on 12 pieces of paper and put them in a hat. They will draw one piece of paper without looking -- that is the month they will travel.

- a. What is the chance they will go during the summer months of June, July or August? _____
- b. What is the chance they will go during the school year, September through May? _____

- ★★ 7. Shown to the right is the way 1 square inch of a newspaper would look, when enlarged so you can see the tiny dots. About how many dots are there per square inch, in a newspaper? Circle the best choice.

- a. 100 b. 500 c. 1000 d. 1500



- ★★★★ 8. Consider each of the following. Can the equation $6 \times 3 + 4 = 22$ represent any of these statements? Circle "yes" or "no" beside each statement below.

- | | |
|----------|---|
| yes no | a. Six tickets at \$3 each plus a \$4 ticket costs \$22. |
| yes no | b. Six \$3 lunches and a \$4 tip come to \$22. |
| yes no | c. A bike trip of 6 miles in 3 weeks, and 4 more weeks, is 22 miles. |
| yes no | d. Six 3-k races, plus a 4-k race, means he ran 22 kilometers that month. |

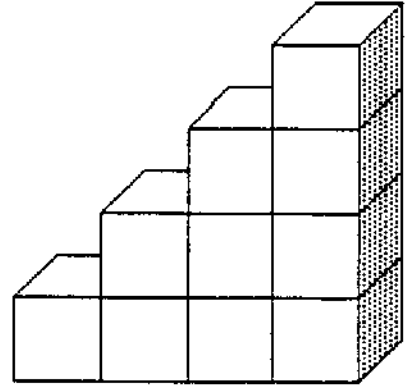
SUNSHINE MATH - 4
Jupiter, XV

Name: _____

(This shows my own thinking.)

- ★★★★ 1. You have been asked to paint the outside surface of this figure made of cubes glued together. It will take approximately one pint of paint per square face. You do not have to paint the bottom.

- a. How many pints of paint will you need? _____
b. If the paint costs \$4.99 per pint, estimate the cost of the paint to the nearest dollar. _____



- ★★ 2. In the space to the right draw a quadrilateral with only one pair of parallel sides.

The name of this quadrilateral is a: _____

- ★★ 3. Ricardo bought one-half dozen donuts for his family. Family members ate one-half of the donuts. How many were left for Ricardo to eat?

Answer: _____ donuts

- ★★ 4. A commercial says "Four out of five dentists surveyed chose sugarless gum for their patients." If 1000 dentists were surveyed, how many recommended sugarless gum?

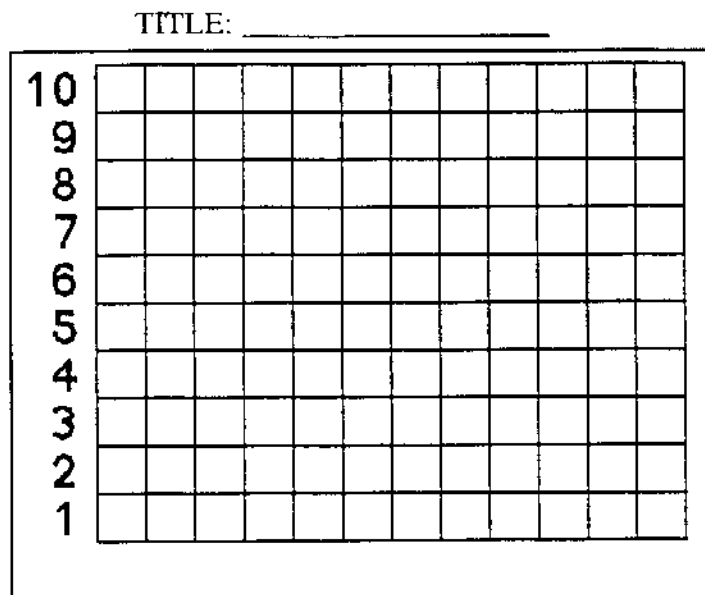
Answer: _____

- ★★ 5. What number from 1 to 25 has the most factors? _____

List its factors: _____

- ★★ 6. Fill in the bar graph below with the data given. Write a title and label the bottom axis.

Antonio surveyed his 36 classmates to find the month of their birthdays. He tallied: 5 in January, 4 in February, 1 in March, 2 in April, 1 in May, 4 in June, 4 in July, 2 in August, 3 in September, 4 in October, 0 in November, and 6 in December.

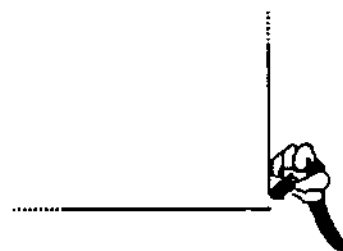


- ★★ 7. A skating rink plays different songs during a two-hour skating party. The songs average 3 minutes each. There is a 15-minute break, without music, when the refreshments are served. How many songs do they need to have ready?

Answer: _____ songs

- ★★ 8. A pencil can draw a line 36 miles long, according to research. Mickey decided to test that theory and draw his 36 miles in the shape of a square, so he would wind up back where he started. How long would each side of the square be?

Answer: _____ miles



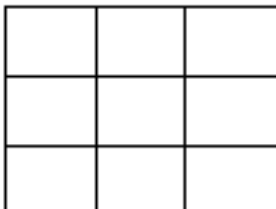
SUNSHINE MATH-4

Jupiter, XVI
thinking.)

Name: _____

(This shows my own

- ★★1. Shade part of the diagram below to show $\frac{1}{3}$ of $\frac{1}{3}$ of the whole rectangle.



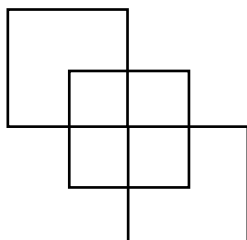
- ★★★★ 2. The table below lists mid-season baseball won-loss records for the Central division of the National League. Answer the questions based on the information provided in the table.

CENTRAL	W	L	TOTAL GAMES
St. Louis	31	40	
Cincinnati	43	25	
Houston	38	31	
Chicago	37	33	
Pittsburgh	30	37	

- Fill in the total games column on the table for each team.
- Which team has the highest winning percentage? _____
- Which team has the lowest winning percentage? _____
- What is the average number of games played per team? _____



- ★ 3. How many squares?



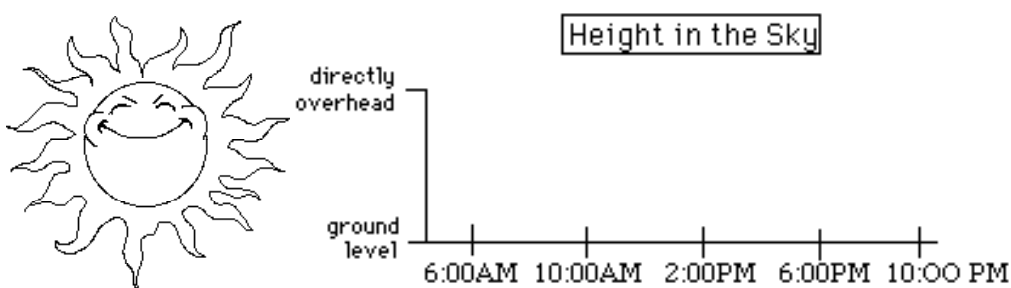
Answer: _____ squares

- ★★★ 4. The Fashion Store is having a Spring sale. The dresses are $\frac{1}{2}$ off and the shoes are $\frac{1}{4}$ off the regular price. Sandy buys a dress that was regularly priced at \$94.50 and shoes to go with the dress that were regularly priced \$29.96. What was the total amount she spent on just these two items? (Assume that there is no tax.)

Answer: _____

- ★★ 5. Make a line graph to show the approximate position of the sun during a sunny summer day.

The sun rises at 6:00 AM and sets at 9:00 PM.



- ★★ 6. Ken is about to eat a bag of M&M's on the 4th of July. The number of each color M&M is listed in the table below. Answer the questions.

green	11
red	8
yellow	13
tan	7
brown	10
blue	5

- a. If Ken picks the first M&M out of the bag without looking, what is the chance he will pick a brown one to match his eyes? _____
- b. What is the chance his first one will match a color in the American flag? _____

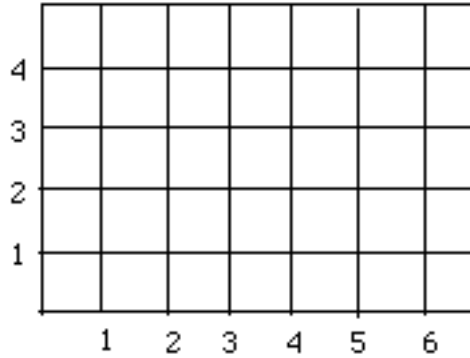
- ★★ 7. Mike needs to buy 4 packages of pencils at 89¢ each, 2 packages of paper at \$1.19 each, and an eraser package for 95¢. He has \$10.00. Estimate to the nearest dollar how much money he will have left.



Answer: _____

- ★★★ 1. Make big dots on the grid for the following ordered pairs, and label them A, B, C, or D.

A is (2,4); B is (6,4); C is (6,1); D is (2,1)

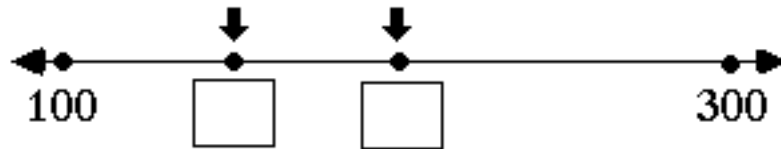


a. Connect A to B to C to D to A with a heavy pencil line.

b. Name the shape you drew. _____

c. Give the *area* of the shape. ____ square units

- ★★ 2. Write in the boxes the numbers to show the arrows' positions on the number line.



- ★★★ 3. The *Guinness Book of World Records* states that the largest pumpkin on record weighed 671 pounds. If this pumpkin were lifted onto the scales by 11 fourth graders, on average, how much would each student be lifting?

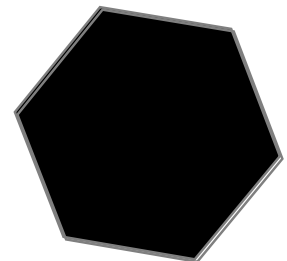
Answer: _____ pounds

- ★★★ 4. The computer tables in a classroom were placed together to form the polygon pictured to the right.

a. Name the polygon that was formed. _____

b. How many angles does this polygon have? _____ angles

c. Are the angles *acute*, *obtuse*, or *right*? _____



- ★★ 5. In the United States, every 57 minutes an underage drinker is involved in a traffic fatality. A recent report urges a crackdown on teen-age drinking and driving. Estimate the number of underage drinkers involved in traffic fatalities each day.

Answer: _____

- ★ 6. Decide if an estimate or a precise calculation is appropriate for each situation. Write "estimate" or "precise calculation" in the answer spaces. Use each term once.

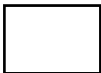

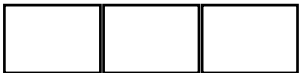

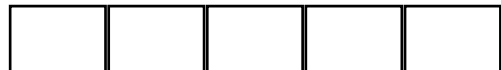
Situation 1: *Checking the change you receive after paying for lunch.*

Answer: _____

Situation 2: *Planning the time it will take to travel from one town to another on a trip.*

Answer: _____

- ★★★★★ 7. Fill in the total number of rectangles found in each pattern below.

PATTERN	NUMBER OF RECTANGLES
	_____
	_____
	<u>6</u>
	_____
	_____

- ★★★ 8. Describe how to find each “next number” of rectangles, without drawing the figure:

Answer: _____

- ★★ 9. How many total rectangles will there be if 7 small rectangle are used in the pattern? _____

SUNSHINE MATH-4

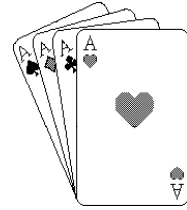
Jupiter, XVIII

Name: _____
(This shows my own thinking.)

★★★★

1. You are playing a card game with a full deck of 52 cards. You win if you draw a *red card* that is a *multiple of 5*. What are your chances of winning on your first draw?

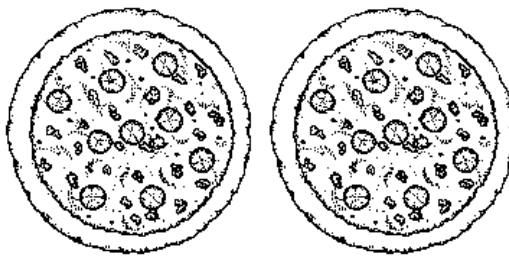
Answer: _____



★★★

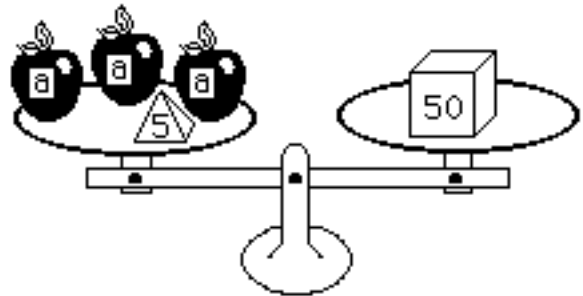
2. The Tappens ordered two pizzas for dinner Friday. Dad ate $\frac{3}{4}$ of one pizza, Jenny ate $\frac{1}{8}$ of a pizza, Danny ate $\frac{1}{4}$ of a pizza, and Mom ate $\frac{1}{2}$ of a pizza. What fraction of a pizza was left for a midnight snack?

Answer: _____ of a pizza



★★★

3. Leah liked to balance objects she found around the house using the science kit she got for Christmas. She found that 3 identical apples and a 5-gram weight exactly balanced a 50-gram weight. Leah said she could tell how much each apple weighed by solving the equation $3a + 5 = 50$. Prove Leah was correct by finding the weight of 1 apple.



Answer: $a =$ _____

★

4. Apalachee Elementary School has a total of 16 classes. The 104 fourth graders are divided equally among 4 classrooms. How many fourth graders are in each class?

Answer: _____

- ★ 5. If one or both of the numbers in a multiplication problem are *even*, the product will be *even*. Therefore if you open a book and multiply the facing page numbers together, the product will be an _____ (*even* or *odd*) number.



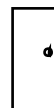
- ★★ 6. Tonya is making friendship bracelets for each girl coming to her sleep-over party. Each bracelet will be braided with 4 purple strings, 3 yellow strings, 2 green strings and 3 blue strings. She is expecting 8 friends to attend her party. Each string costs 10 cents. It takes Tonya about 20 minutes to braid each bracelet.



- a. How much will the string cost Tonya? _____
- b. How long will it take Tonya to make all the bracelets? _____ hours and _____ minutes

- ★ 7. About how long is it around the outside edge of an ordinary door in your home? Circle the best answer below.

- (a) 10 meters (b) 4 meters (c) 15 meters (d) 6 meters



- ★★ 8. Below is a bus schedule showing departure times and arrival times from various cities in Florida to Ft. Lauderdale. How much time does the longest trip take?

DEPARTURES		ARRIVALS	
Jacksonville	8:30 AM	Ft. Lauderdale	3:00 PM
Tallahassee	7:30 AM	Ft. Lauderdale	7:00 PM
Tampa	10:00 AM	Ft. Lauderdale	3:00 PM
St. Augustine	8:00 PM	Ft. Lauderdale	4:00 AM

Answer: _____ hours and _____ minutes

SUNSHINE MATH-4

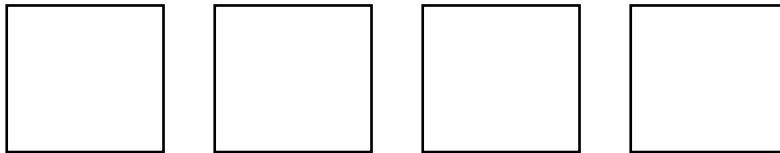
Jupiter, XIX

Name: _____

(This shows my own thinking.)

★★

1. Divide each of the squares below into fourths. Each one must show a different representation of fourths.



★

2. Tiger roared every time someone passed its home in the zoo. Tiger roared more than 39 times but fewer than 46. It roared an odd number of times. You say the number when you count by 3's and by 5's. How many times did Tiger roar?



Answer: _____ times

★★

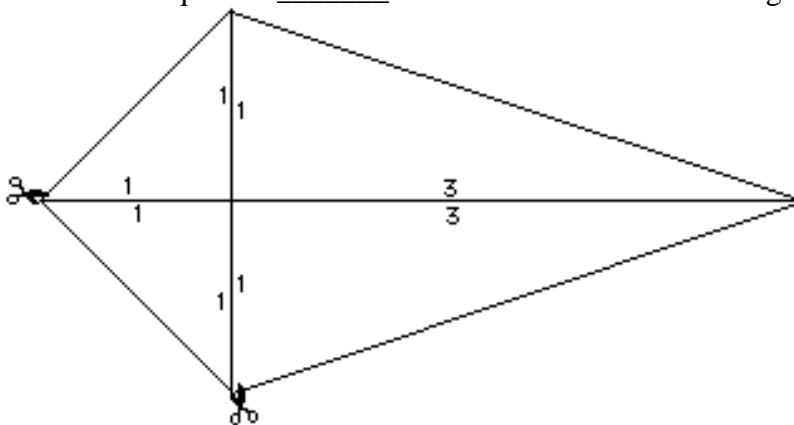
3. Paul Lynch holds the world record for one-arm push-ups. Paul once did 3,855 one-arm push-ups in five hours. On average, how many did he do in 1 hour?

Answer: _____ push-ups

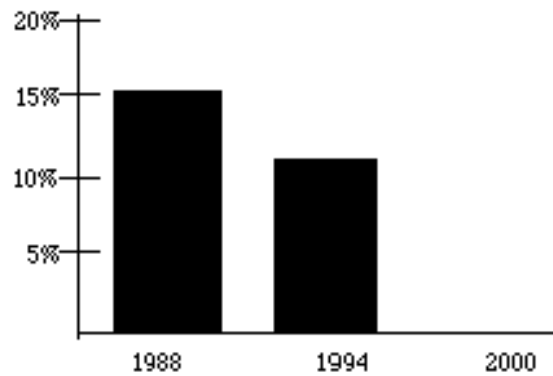
★★

4. Trace over the figure of the kite below. Cut along the lines of your tracing that go from vertex to vertex so you have four triangles. Arrange these triangles (in pairs) so that they make two quadrilaterals: a square and a rectangle. Find the perimeter of each quadrilateral.

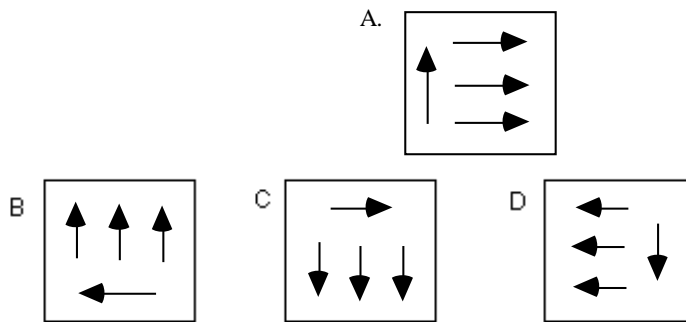
Perimeter of the square: _____ Perimeter of the rectangle: _____



- ★★ 5. The bar graph shows the percent of women who were members of elected parliaments or legislatures in 1988 and 1994. Fill in the graph to show the percent in the year 2000, if the decline is the same from 1994 to 2000 as it was from 1988 to 1994.



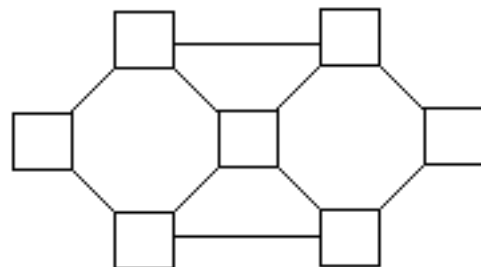
- ★★ 6. Circle the figure below -- B, C, or D -- that shows figure A rotated 270 degrees clockwise.



- ★★ 7. During the last week of school, a few students got the silly willies on Monday. On Tuesday, 2 more students than on Monday caught the silly willies. Each day after that, 2 more students than on the day before caught them. On Friday, 12 students caught them. How many students caught the silly willies in 5 days?

Answer: _____ students

- ★★ 8. Arrange the digits 1-7 in the squares so that no two consecutive digits are connected by a line.



SUNSHINE MATH-4

Jupiter, XX

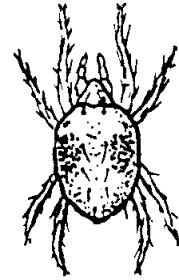
Name: _____

(This shows my own thinking.)

★★★★

1. The owner of "Pets On The Go" pet store currently has the following animals in his store: 5 dogs, 4 cats, 12 birds, 2 turtles, 3 snakes, 2 giant lizards, 1 pot-bellied pig, and 4 spiders . How many legs were on the 33 animals?

Answer: _____ legs



spider

★★

2. Mrs. Rickets is a farmer. She grows fruits and vegetables. The largest pumpkin she has ever grown weighed 68 pounds. The largest cantaloupe she has ever grown weighed 12 pounds, 8 ounces. What is the difference in weight between the pumpkin and the cantaloupe?

Answer: _____ pounds, _____ ounces

★★★

3. If a customer wanted to buy Mrs. Ricket's largest canteloupe and the price was 50¢ per pound, how much would the customer have to pay?

Answer: _____

★

4. Mark hid a \$10 bill inside his favorite book. He forgot the pages where he hid it. If the sum of the pages where the bill is hidden is 177, on what pages will Mark find his money?

Answer: page _____ and page _____

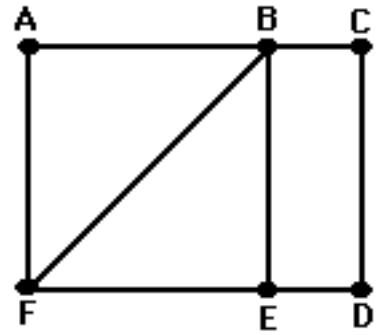
★

5. Mr. Dexter brought home $\frac{1}{2}$ dozen eggs. He accidentally dropped the carton on the floor and $\frac{1}{3}$ of the eggs broke. How many eggs does he have left?

Answer: _____ eggs

★★

6. If you start in the right place, you can trace this entire map with your pencil without retracing a path between two points. Circle the two points where you can start to do this amazing feat!



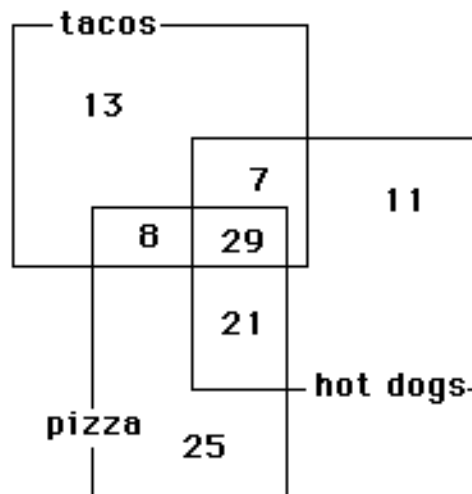
★★

7. The 6 fourth-grade classes at Marathon Elementary School are having a kick-ball tournament. Each class must play each other once in the tournament. How many kick-ball games must be scheduled?

Answer: _____ games

★★★

8. The cafeteria staff at Fairlawn Elementary took a poll of its fourth grade students to find out how many students liked hot dogs, pizza, or tacos. The results are shown in the Venn diagram below.



a. Sixty-eight students liked hot dogs. How many students like tacos? _____ students

b. How many students liked both pizza and tacos, but not hot dogs? _____ students

c. How many students liked all three types of food? _____ students