★★★★ 1. The third grade students at Westview Elementary School built a nature trail behind their school. The trail started and ended at the same place. It had five sides. Two were 60 feet long and the remaining three were 30 feet long.

A. What is the name of the shape of the nature trail?_____

B. How long is the nature trail (in feet)?_____

C. How long is the nature trail (in yards)?_____

★★★ 2. For his birthday Zack gets four pairs of shorts (red, blue, black, and green) and three new T-shirts (a Batman T-shirt, a Braves T-shirt, and a Carolina Panthers T-Shirt). How many <u>different</u> <u>outfits</u> can Zack make with his new clothes?

Panthers

Braves

Batman
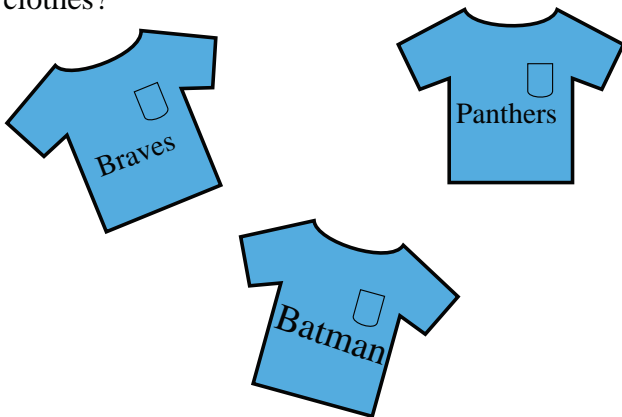
★ 3. How many rectangles are in the figure below?
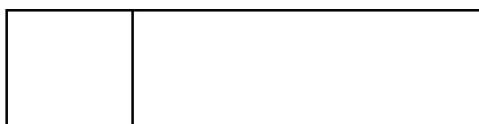
★★ 4. During softball practice, Lakisha hits the ball on the average of two out of every four pitches. If she gets ten pitches during practice, how many times would you expect her to hit the ball?

★★★ 5.   What number am I?_____

I AM NOT EVEN
I AM GREATER THAN 200
THE SUM OF MY DIGITS IS NINE
I AM A MULTIPLE OF FIVE
I AM LESS THAN 300
I AM EVENLY DIVISIBLE BY NINE

Strategy of the Month

*Noticing patterns helps people solve problems at home, at work, and especially in math class! Math has been called "the study of patterns," so it makes sense to look for a pattern when you are trying to solve a problem. Recognizing patterns helps you to see how things are organized and to make predictions. If you think you see a pattern, try several examples to see if using the pattern will fit the problem situation. Looking for patterns is helpful to use along with other strategies such as make a list or guess and check. How can **finding a pattern** help you solve this problem?*
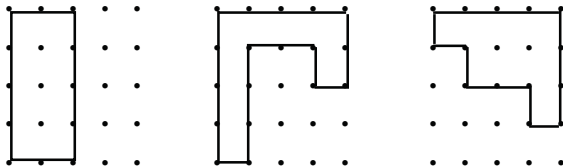
If the first day of a year is a Friday what day of the week is February 19 of the same year?

★★★　6. Are all of these geoboards divided in half?

Answer:_____

★★★　7. Brittany and Chris are playing a game called Carousel. They get six points every time they draw a green card and ten points every time they draw a black card. Whoever scores 150 points first wins the game. Brittany has 82 points now and she has nine cards. Chris has 88 points now and ten cards. How many cards do Brittany and Chris have of each color?

Brittany:　Green_____
　　　　　　 Black_____

Chris:　Green_____
　　　　　Black_____

★★★　8. You want to make cookies for a class of 24 students. Using the recipe for cookies, how much sugar would you use? Each recipe will make six large cookies.

1/2 cup flour
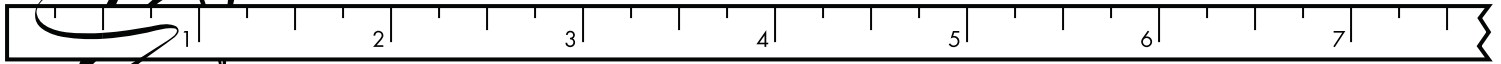1/2 cup sugar
1/2 cup peanut butter

Answer:_____cup(s) of sugar

★★　9. There are five players on a basketball team. If ten teams are playing in the tournament on Sunday, how many players are there altogether in the tournament?

★★★★ 1. Steven, Jency, Cameron, and Ali like to collect things. Among the four students, they collect T-shirts, rocks, baseball cards, and shells. Jency likes to collect only rocks. Ali collects two items but she doesn't collect T-shirts or shells. Cameron collects the same thing as Jency and Steven. Steven likes to collect only those things that Ali doesn't like to collect. What does each child collect?

Steven: _____

Jency: _____

Cameron: _____

Ali: _____

★ 2. Chad and his family hiked a 40 mile stretch of the Appalachian Trail this summer. On this section of the Appalachian Trail there is an aide station every ten miles. After hiking 23 miles, Chad tripped and seriously injured his arm. Circle the closest aide station his family should use.

0 mi.   10 mi.   20 mi.   30 mi.   40 mi.
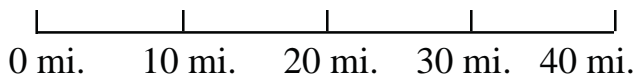
★★ 3. How many triangles can you find in this picture?
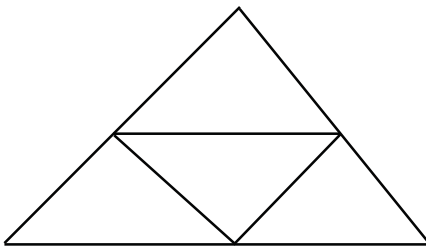
★★★ 4. How many small cubes would it take to build the rectangular prism below?_____
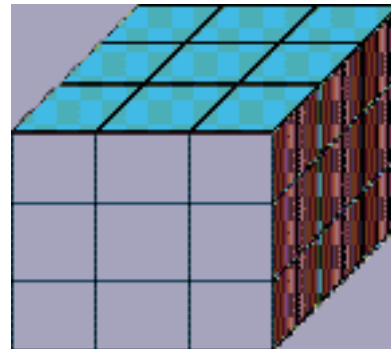
★★★ 5. You are taking a survey at Tina's doughnut shop. You observe 16 cars going through the "drive through." Every person, driver and passenger, orders a doughnut. Some cars only contain one person, a driver. No car contains more than four people, including the driver.

Estimate the fewest doughnuts that could be sold._____

Estimate the most doughnuts that could be sold to the nearest ten._____

Strategy of the Month

*Sometimes mathematical ideas are hard to think about without something to look at or to move around. Drawing a picture or using objects or models helps your brain "see" the details, organize the information, and carry out the action in the problem. Beans, pennies, toothpicks, pebbles, and cubes are good manipulatives to help you model a problem. You can use objects as you guess and check or look for patterns. Try **using objects** to help you solve this problem:*

Twenty-seven cubes are placed together to make a large cube that is painted on the outside. How many small cubes will have 2 and only 2 faces painted?

★★★ 6. How many flowers can Worth buy with these coins if a flower costs 11 cents?

(10 ¢) (5 ¢)   Flowers 11¢

(1 ¢) (25 ¢)
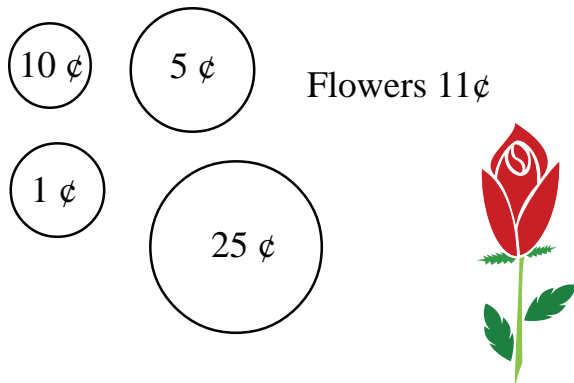
Answer:_____flowers

★★ 7. Here are some clues to find my secret shape.

I am a four sided figure.
I have four right angles.
People that don't have any fun are called me.
        What am I?

Answer:_____
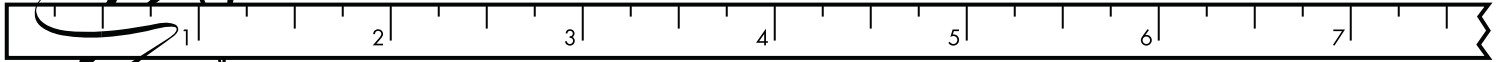
★★ 8. These are the blocks needed to make one tent:

Number of Tents	Number of Triangles	Number of Trapezoids
1	2	1
2	4	2
3		
4		
5		
6		

How many triangles and trapezoids will you need to make six tents?

Answer:_____triangles
        _____trapezoids

★★ 1. How many blocks do you need to complete this solid cube?   Answer:_____
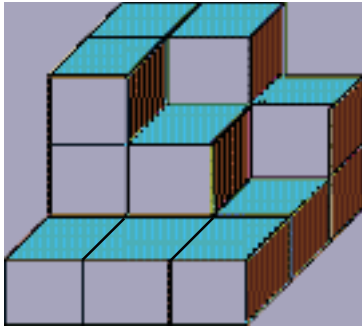
★ 2. Brenda went to visit her boyfriend at college. Her car's gas gauge looked like figure A when she started. It looked like figure B when she got to the college. If her gas gauge was working correctly, could she return home without adding gas? Answer:_____

A.

E   F

B.

E   F

★★★★ 3. Madeline sells five roses on the first day, seven roses on the second day, ten on the third day, fourteen on the fourth day. If Madeline continues her selling pattern, how many roses will she sell on the tenth day? How many will she sell on the fifteenth day?

Answer:_____roses on the tenth day
              _____roses on the fifteenth day
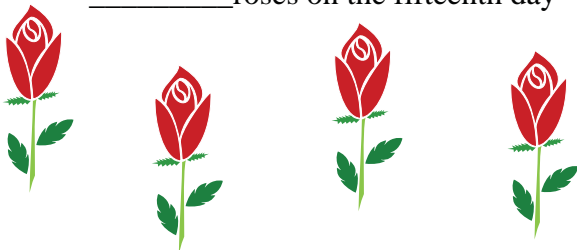
★★★ 4. There are 77 french fries in a large order of fries. A small order of fries is one-third the size of a large order of fries. Estimate how many fries are in the small order.

Answer:_____
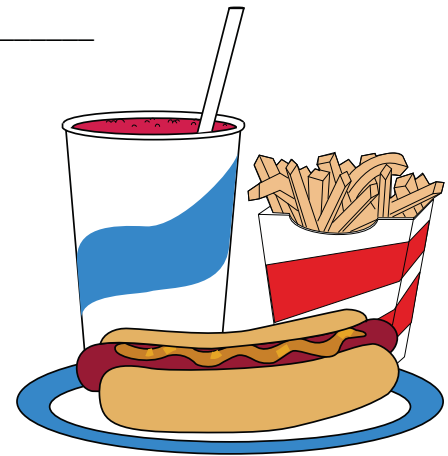
Students, Please Solve the Problem Below Today

Strategy of the Month

*When a problem involves data with more than one characteristic, **making a table, chart, or graph** is a very good way to organize the information. It helps your brain to identify patterns and to discover any missing data. Tables help you record data without repeating yourself. Making a table or chart is especially useful for certain problems about probability and for some logic problems. Sometimes tables and charts are included in your information and you need to read through them carefully to understand the data you need to solve your problem. Creating a graph is also a good way to organize and visualize information. **Make a table** to solve this problem:*

A school cafeteria sells popsicles for 50¢, nutty buddies for 80¢, and ice cream sandwiches for 60¢. If a student spent $6.00 in May for frozen snacks what could the student have purchased?

★ ★ ★   5. You have been given 24 square ceramic tiles. Complete the chart below showing he dimensions of all the rectangles you can make with 24 square tiles (without any gaps between the tiles.

LENGTH	*WIDTH*

★ ★   6. What number am I?_____

> *I AM SMALLER THAN 200*
> *I AM A MULTIPLE OF 10*
> *YOU CAN MAKE ME IF YOU HAD*
> *   ONLY QUARTERS*
> *I AM AN EVEN NUMBER*
> *THE SUM OF MY DIGITS IS SIX*

★ ★ ★ 7. The circle below has the words "MATH SUPER STARS" written around the edge, with one letter in each section. A spinner has been created for you.
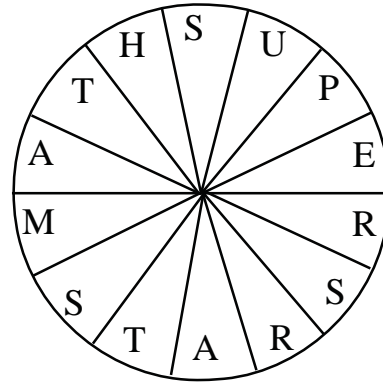
How many sections are on the spinner? _____

What are the letters used in the spinner?

_____
_____
_____

Create a fraction that describes the frequency (number of times) you would expect to land on the letter.

Example: If you counted 14 sections, and the letter 'A' appears twice, you would write 2/14 as your fraction.

A _____
E _____
H _____
M _____
P _____
R _____
S _____
T _____
U _____

If you were to spin the spinner 100 times, which letter (A, E, H, M, P, R, S, T, or U) do you think will the spinner land on most often?   _____

Why did you choose that letter?

_____
_____
_____
_____
_____

★★★ 1. The students in Mrs. Neal's third grade class conducted a survey to determine what kind of soft drinks their friends liked. They found that 1/2 of the class liked Coca-Cola best, 1/4 of the class liked Dr. Pepper best, and 1/4 of the class liked Mountain Dew best. Use the circle below to construct a graph that illustrates their findings. Be sure to label each section with the type of soft drink it represents.
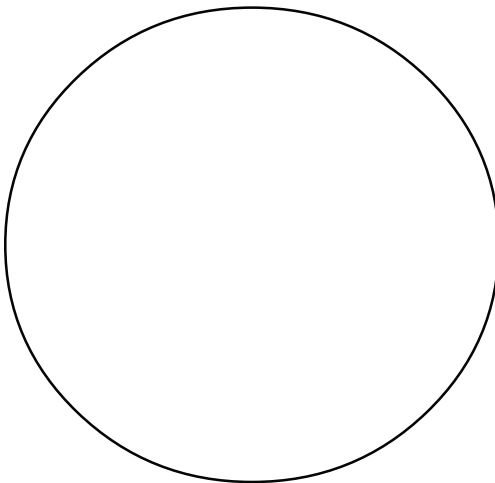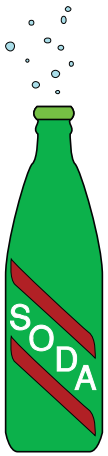
★★★★ 2. What are the dimensions of all the different rectangular quilts that can be made with 18 individual squares (you <u>must</u> use all 18 quilt squares)?_____
_____

What are the dimensions of the <u>largest square quilt</u> that can be made if you have 18 individual quilt squares (hint: you <u>won't</u> be able to use all 18 individual quilt squares)?_____
_____

★★ 3. Jenny has seven coins. Their total value is 48 cents. What coins does Jenny have?
_____
_____
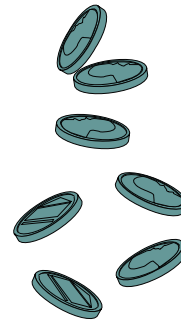
★ 4. Using the digits 0-4 once and only once, what is the largest odd number you can write?
_____

Strategy of the Month

*Some problems are difficult to "see" even if you draw a picture. For these problems, it can be helpful to actually **act out the problem**. When you role play with friends or people at home, you may discover the solution as you act out the problem. Or you may recognize another strategy that will help you find the answer. Sometimes "acting out" a problem can be done with manipulative materials. To find the solution to the problem below, become the director and choose your cast to act this out:*

There are four boys in the Grant family. Alex is older than Terry and younger than Stuart, Ross is not the oldest or the youngest. Alex does not have two older brothers. Write the names of the boys from oldest to youngest.

★★ 5. Neil drops a green, blue, white, and black marble into a bag. He picks one marble out of the bag and places it back in the bag. He repeats this 12 times. He has recorded his results below. Use the chart to answer questions.

Green | | | |

Blue |

White   ⊥⊥⊥⊥

Black | |

1. Which marble comes up the most times?_____
2. How many times?_____
3. What are the possibilities that Neil will pull out a white marble, according to his chart?_____

★★ 6. Sam went on a picnic. While eating his lunch he saw spiders and ants on his blanket. He looked closely and noticed that the spiders had eight legs and the ants had six legs. He saw 26 legs in all. How many spiders and ants did he see?

Answer:_____spiders and _____ants.

★★★ 7. Which puzzle can you trace without lifting your pencil or going over a line twice? Put an X on the place where you started.
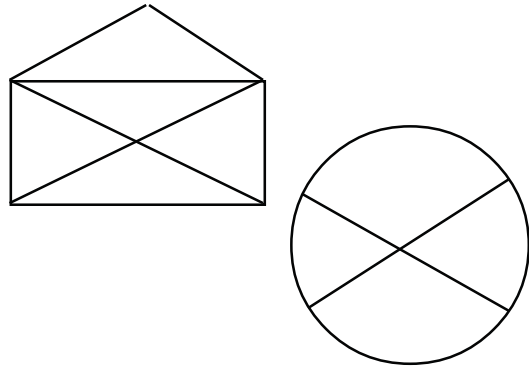
★★★ 8. For supper Jeff went to a buffet. He could choose from among these meats: ham, steak, and fried chicken. He can also choose as a vegetable either green beans or mashed potatoes. What are all the possible ways that he can eat supper if he has only 1 meat and 1 vegetable?

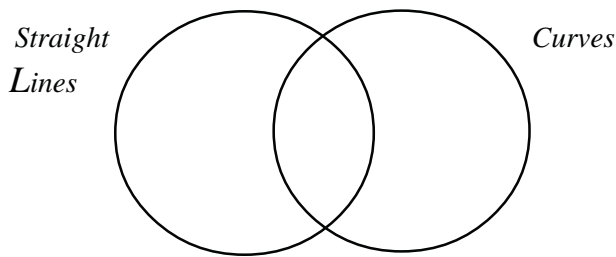What are the chances that he will eat ham and green beans?_____out of_____
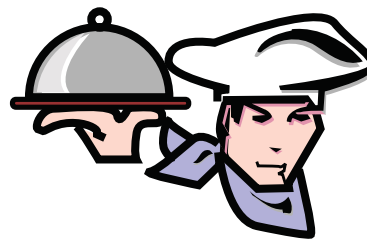
★★★ 1. a. Which numbers 1 - 10 have straight line segments?
b. Which numbers 1 - 10 have curves?
Make a Venn diagram showing where the numbers belong.   LOOK AT THE NUMBER CLOSELY:
1 2 3 4 5 6 7 8 9 10

Straight Lines   *Curves*

★★ 2. Mrs. Davis baked 6 pizzas. Her class of 24 students ate all of the pizzas. Show how Mrs. Davis cut the pizzas so that everyone got an equal amount of each type.

Pepperoni   Pepperoni   Pepperoni

Cheese   Hamburger   Hamburger
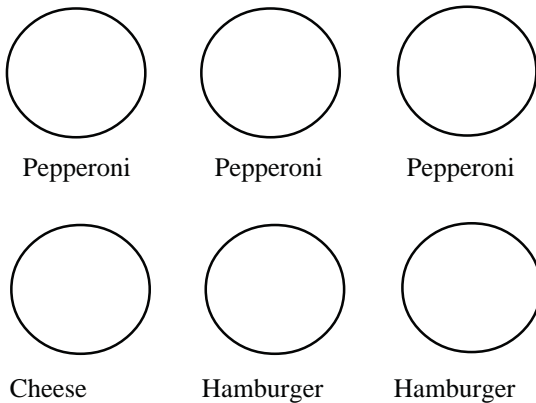
★★★ 3.   If you were to color a hundreds board on every seventh number beginning with the number 7, what number have you colored after coloring 12 numbers?

Answer:_____

★ 4. What are the equations that you can find using numbers from one to ten that fit these clues:
        Clue 1: The addends are both odd.
        Clue 2: The sum of the digits is ten.
    EXAMPLE: 1 + 9 = 10   **ADDENDS (1 and 9) are both odd numbers.
                          **The sum of the digits (1 and 9) is ten.
List the equations:

_____
_____
_____

★★★★ 5. Chelsea colored a turtle, dog, and cat in her coloring book. She wants to surprise her Mom by hanging them on the refrigerator in a triangle. How many different ways can Chelsea arrange these pictures?

Answer:_____

Strategy of the Month

What do you do if you have a problem that seems to be very complicated? It may have a lot of large numbers, too much information, or multiple conditions. One approach is to create a simpler problem like the one you need to solve. As you solve the easier problem, you may see the way to solve the more difficult one. Or you may discover a different process that will work with the harder problem. The trick is to be sure that your simpler problem is enough like the original one that the patterns or process you use will help you with the harder situation. ***Make a simpler problem first as you solve this:***

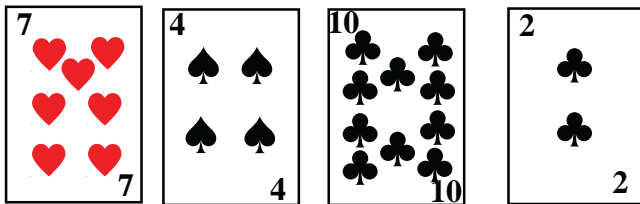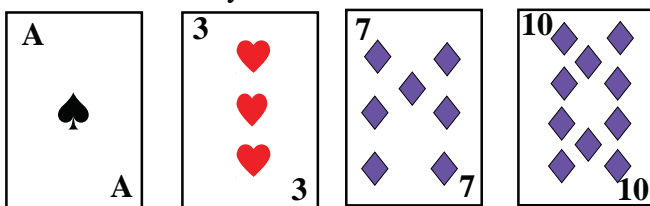The pages in a book are numbered from 1 to 256. How many times is the digit 4 printed?

★★ 6. Jerry dealt four cards to himself and Ryan. These are the cards that were dealt to Ryan:

Card showing:
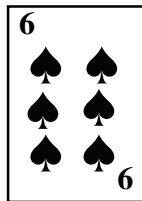
Cards dealt to Jerry:

The ace (A) equals one and all the other cards equal the value on the card. Each player must make a problem that equals the one card showing. Show all the ways they can equal six using only their cards.
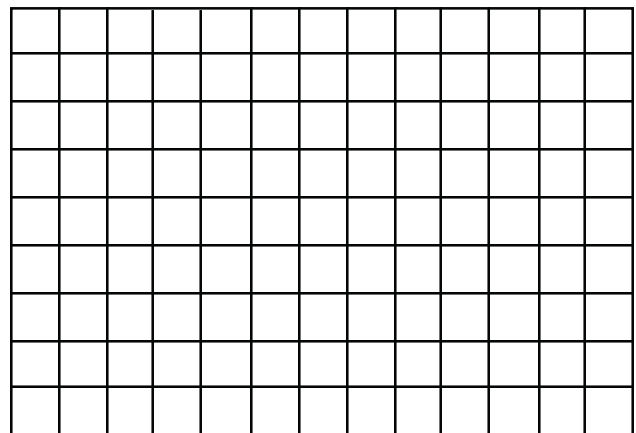
Jerry:_____

Ryan:_____

★★ 7. It takes about three hours and 45 minutes to drive from Micheal's house to his grandmother's house. If his family wants to arrive at his grandmother's house by 5:30 p.m., when should they leave their house?_____

★★ 8. Using the graph paper below, create two different designs, each composed of five squares, that have the same area (five squares), but have different perimeters. In each arrangement each square must touch another square at least at one point.