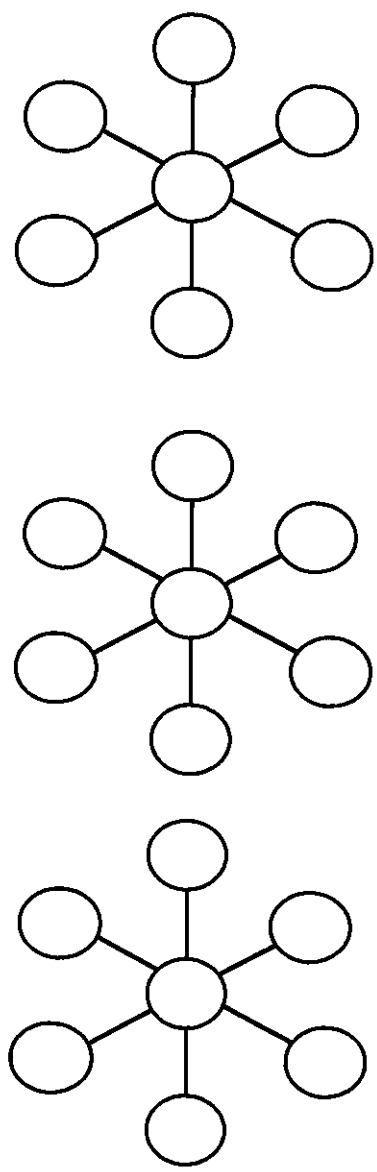


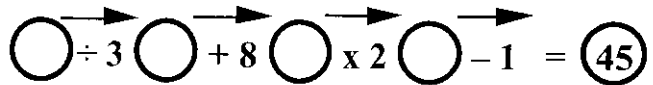
★ 1. What number could be added to 150 so that the sum would be between 500 and 525?

Answer: \_\_\_\_\_

★★★★ 2. Find three ways that the sum of three digits in a line equal 17. Don't repeat the digits within a design.



★★★ 3. If you begin with a certain two-digit number and follow the arrows, you will end with 45.



### Strategy of the Month

Someone said, "A picture is worth a thousand words." Turning the words of a problem into a picture or a diagram can help you "see" the problem. By using the part of your brain that visualizes a situation or object, you may see relationships or information that helps you solve the problem. When someone tells you a story, try turning the words into a motion picture or a cartoon. When reading a description, try "seeing it in your mind's eye." If you can do these things, this strategy may be for you! Try using a picture or make a diagram to solve this problem:

Every bike slot in a bicycle rack was filled. Donna's bike was in the middle. There were six bikes to the right of Donna's. How many bicycles were in the bicycle rack?

## MathStars Home Hints

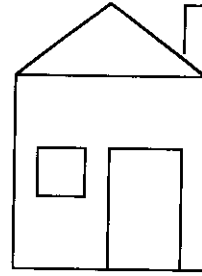
*Every year you grow and change in many different ways. Get someone to help you measure and record these data about yourself. Be sure to save the information because we will measure again in two months!*

How tall are you? \_\_\_\_\_

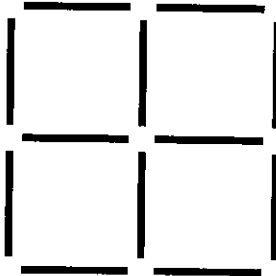
How much do you weigh? \_\_\_\_\_

What is the circumference of your head?  
\_\_\_\_\_

★★ 7. Find all the right angles on the house below. Put a square on each one like this:



★★ 4. How can you remove two toothpicks from the square shape below and leave two squares of different sizes? Cross out the two that should be removed.



★★ 8. Use the digit 8 four times to make 89.

★★★ 9. Place the other letters of the alphabet above or below the line given below using the same rule that was used for A through I.

A	E F	H I
_____		
B C D	G	

★★★ 5. Miss Black's class began a stem and leaf graph of the following data. Complete the graph.

Number of organisms in each person's square foot of space on the playground.	1	1, 7
	2	0, 1, 2

28, 29, 17, 21, 36, 20,  
33, 11, 22, 33, 35, 41

★★★ 6. John is twice as old as his sister Mary. Mary's age is  $\frac{1}{6}$  the age of her mother. Their mother is 30. How old are John and Mary?

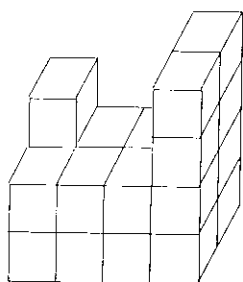
John \_\_\_\_\_ Mary \_\_\_\_\_

## Setting Personal Goals

*Problem solving is what you do when you don't know what to do. Being a good problem solver will help you be ready to live and work in our changing world. Computers can do computations but people must tell the computers what to do. Good problem solvers know how to make plans and use many different strategies in carrying out their plans. They use all of their past experiences to help them in new situations. We learn to swim by getting in the water; we learn to be good problem solvers by solving problems!*

★★★ 1. What is the volume of the solid figure below? If the outside were painted blue, how many cubes would have only three sides painted blue?

\_\_\_\_\_  $\text{cm}^3$  is the volume  
 \_\_\_\_\_ cubes are painted blue on three sides



★★★ 2. Principal Greene orders pencils for the school store by rounding the number of students in each grade to the nearest 10 and doubling that number. What is the total number of pencils he will order?

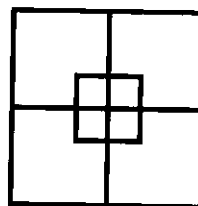
Answer: \_\_\_\_\_ pencils

Grade	K	1	2	3	4	5
# of students	87	94	97	78	72	84

★★ 3. A digital clock shows either three or four digits. At what time do the digits have the greatest sum?

★ 4. How many squares are in the figure below?

Answer: \_\_\_\_\_ squares



★★ 5. Three friends shared some cookies. They each got two and two-thirds cookies. How many cookies did they have altogether before they divided them?

### Strategy of the Month

*Your brain is an organizer. It organizes information as it stores that information. When a problem involves many pieces of information, your brain will have an easier time sorting through it if you make an organized list. A list helps you be sure you have thought of all of the possibilities without repeating any of them. Like drawing a picture or making a diagram, making an organized list helps your brain "see" the problem clearly and find a solution. Try **making an organized list** to solve this problem:*

If you must use 15 or fewer coins, how many different combinations of coins can be used to make \$1.00?

## MathStars Home Hints

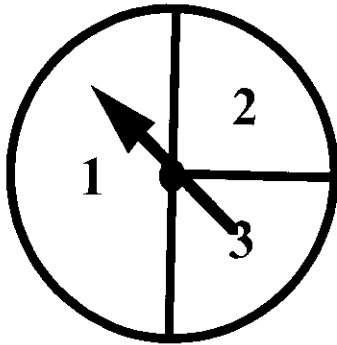
Sometimes the hardest part of solving a problem is just getting started. Having some steps to follow may help you.

1. Understand the information in the problem and what you are trying to find out.
2. Try a strategy you think might help you solve the problem.
3. Find the solution using that strategy or try another way until you solve the problem.
4. Check back to make certain your answer makes sense.

★★★★ 6. Given  $y$  is two times  $x$ ,  $z$  is three times  $x$ , and  $x + y + 3z = 12$ . What are the values of  $x$ ,  $y$ , and  $z$ ?

$$x = \underline{\quad} \quad y = \underline{\quad} \quad z = \underline{\quad}$$

★★ 7. On this spinner, the probability of getting a one is  $1/2$  or 1 out of 2. What is the probability of getting a 2?



★★ 8. Circle the whole number below that is closest to the sum of these numbers:

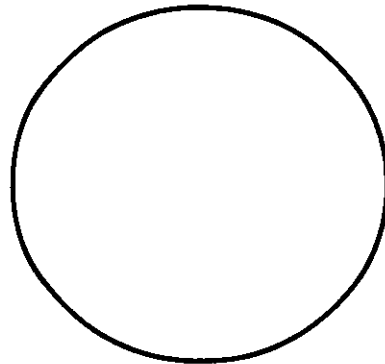
$$2\frac{1}{73} + 6\frac{40}{44} + 8\frac{3}{58} + 1\frac{15}{17} =$$

17      19      21      23

★★★★ 9. Katie gave a number problem to Jenny. She told her to pick a number, double it, add 10 to it, and then subtract 2. Jenny's answer was 34. What number did Jenny pick?

Answer: \_\_\_\_\_

★★★★ 10. Show how you could divide a circle into 11 pieces using only 4 straight lines.



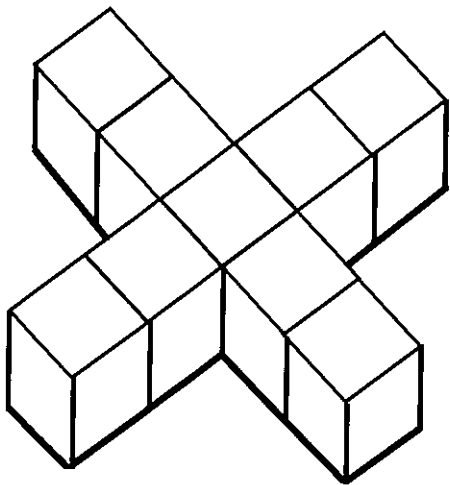
## Setting Personal Goals

Being able to ask good questions will help you in many ways. Use these to solve problems:

- What information do I know?
- What else do I need to find out?
- What question am I trying to answer?
- Have I missed anything?
- Does my answer make sense?

Practice asking good questions!

★★★ 1. Nine cubes form to make an X. If the complete figure is painted red, how many cubes have exactly four faces painted red? How are the remaining cubes painted? Write on each cube the number of its faces that are painted.



★★★ 2. November 8 is on Wednesday. Gary's birthday is in November. This year his birthday is on a weekend. The date has two digits. You say the date when you count by twos. The sum of the digits is 8. What is the day and date of Gary's birthday?

Day of the week \_\_\_\_\_

Date \_\_\_\_\_

★★ 3. Lila saw a shirt on sale at 25% ( $\frac{1}{4}$ ) off. It's original price was \$12. How much is the shirt now?

★★★ 4. On a 20 question math test, your teacher gives you five points for every correct answer and takes away one point for each incorrect answer. If you score 70 on the test, how many did you get correct?

Answer: \_\_\_\_\_ correct

## Strategy of the Month

*Being a problem solver is something like being a detective! A detective has to solve crimes by guessing what happened and checking the guess to see if it fits the situation. For some problems, your best strategy may be to make a guess and then check to see if your answer fits the problem. If not, decide if your guess was too high or too low and then make a second "guesstimate." A good detective keeps records (usually some kind of chart) to help see any patterns and to narrow down the possibilities. You should do this too. The results of incorrect guesses can give you valuable clues to the correct solution. **Guess and then check** the solution to this problem:*

I am a 2-digit number over 50. When you put me in groups of 7, 2 are left over. The sum of my digits is 11. What number am I?

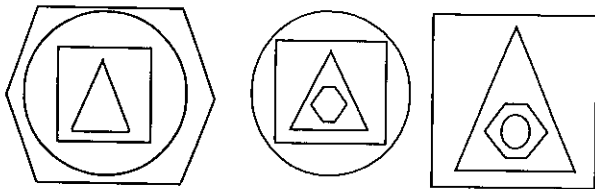
## MathStars Home Hints

*Memorizing number facts will save you time.*

*Flash cards are one way to learn new facts, but you also might try these ideas:*

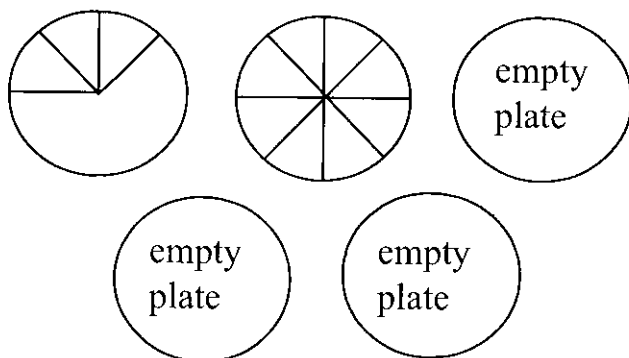
- play dice or card games in which you need to add, subtract, multiple, or divide.
- learn new facts using ones you already know ( $7+7=14$  so  $7+8=15$ ).
- learn facts that are related to each other ( $7 \times 6=42$ ,  $6 \times 7=42$ ,  $42 \div 6=7$ ,  $42 \div 7=6$ ).
- make a list of the facts you need to memorize and learn 5 new facts each week.
- Spend 5-10 minutes every day practicing facts.

★★ 5. What would the next shape look like?  
Draw it on the line.



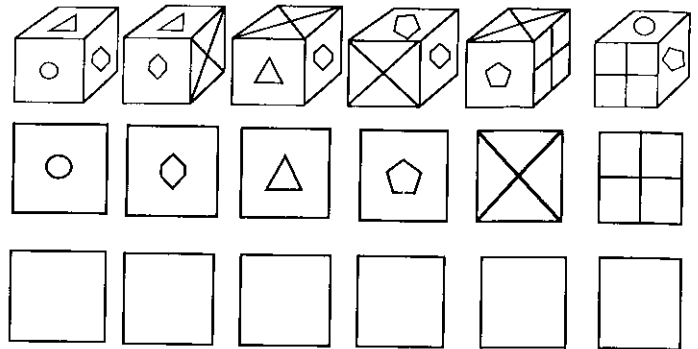
Answer: \_\_\_\_\_

★★ 6. Allison's mom baked five pies for her birthday party. Each person who came to the party ate one piece, and all the pieces were the same size. The pies that were left over are shown below. How many people came to the party?



Answer: \_\_\_\_\_ pieces

★★★★ 7. The pictures below all show the same block, but seen from a different view each time:



Draw the design that is opposite these sides.

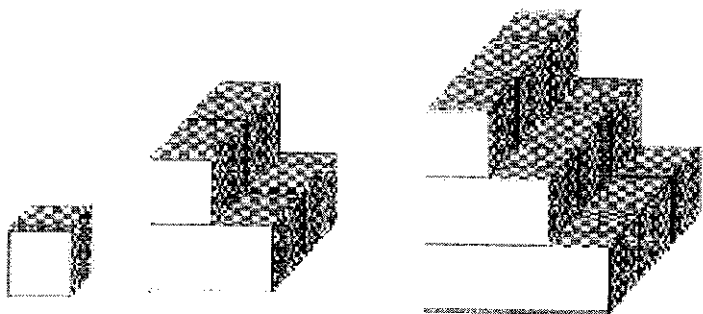
★ 8. It's now 12:10 p.m. What time was it 15 minutes ago?

Answer: \_\_\_\_\_

## Setting Personal Goals

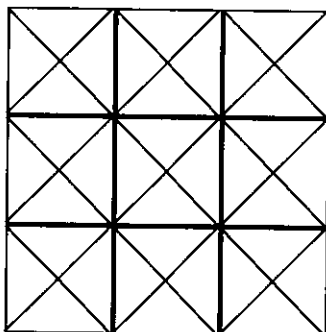
*Communicating mathematically means that you are able to share your ideas and understandings with others orally and in writing. Because there is a strong link between language and the way we understand ideas, you should take part in discussions, ask questions when you do not understand, and think about how you would explain to someone else the steps you use in solving problems.*

★★★★ 1. How many cubes will it take to build the next figure in the pattern below?



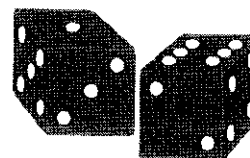
★★ 2. At Henry's Restaurant, a customer gets a free lunch after paying for six. Caroline ate lunch at Henry's 50 times last year. How many of those 50 lunches were free?

★★★★ 3. Color the square below so that 50% is red, 25% is green, and 25% is yellow.



★★★ 4. Which sum is most likely to be rolled on a pair of dice, 3 or 7?

\_\_\_\_\_ is most likely. Why would this be true?



★ 5. What fraction of the letters in the word MULTIPLY are also in the word PRODUCT?

### 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?

## MathStars Home Hints

*Set aside a special time each day to study. This should be a time to do homework, to review, or to do extra reading. Be organized and have a special place in which to work. This place needs to have a good light and to be a place where you can concentrate. Some people like to study with quiet music; others like to sit at the kitchen table. You need to find what works for you!*

*Remember that when you are reviewing or working on solving problems it may help to study in a group.*

★★ 6. This recipe makes four servings of lemonade. How many lemons are needed to make ten servings of lemonade?

### LEMONADE

2 lemons  
2 quarts of water  
1/2 cup of sugar

Squeeze lemon juice into a pitcher.  
Add water and sugar. Stir well and pour over ice.

★★★ 7. Sam and Sue have only nickels and dimes. Sue has 35¢. Sam has the same number of dimes as Sue has nickels, and he has half as many nickels as Sue has dimes. How many nickels does Sue have?

★★ 8. There are 12 pages in Bill's football card album. Each side of the page holds 12 cards. When his book is half full, how many cards will Bill have collected?

★★★ 9. If you must use two quarters and a total of 8, 9, or 10 coins, how many different combinations of coins can be used to make a dollar? Use the table below to find your answer.

# of coins	Quarters	Dimes	Nickels	Pennies
8				
9				
10				

★★★ 10. A cereal company puts a 10¢ coupon in every other box of cereal it packages. It puts a pencil in every fifth package and a coupon for a free hamburger in every eighth package. Out of the first 100 boxes, how many will have all three items: a 10¢ coupon, a pencil, and a free hamburger coupon?

## Setting Personal Goals

If your goal is to become a more responsible student, it means that you

- actively participate in class.
- complete your assignments.
- have everything you need in class.
- ask for help when you do not understand.
- be willing to investigate new ideas.



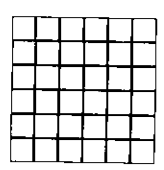
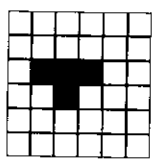
★★ 1. Draw a picture of what the tetromino would look like after it is turned or rotated 90 degrees.

★★ 3. Fill in the missing numerals.

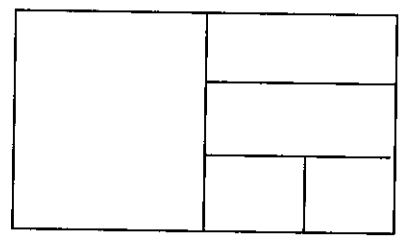
\_\_\_\_\_ x \_\_\_\_\_ x 2 = 42

Before 90 degree turn

After 90 degree turn



★★ 4. If the area of each small square is 10 centimeters, what is the area of the entire figure?



★★★★ 2. Find the products of the following problems. Look for a pattern in the products. Write a rule for the product. Do you think it will always work?

$$\begin{array}{r} 44 \\ \times 11 \\ \hline \end{array}$$

$$\begin{array}{r} 23 \\ \times 11 \\ \hline \end{array}$$

$$\begin{array}{r} 32 \\ \times 11 \\ \hline \end{array}$$

Rule: \_\_\_\_\_

### Strategy of the Month

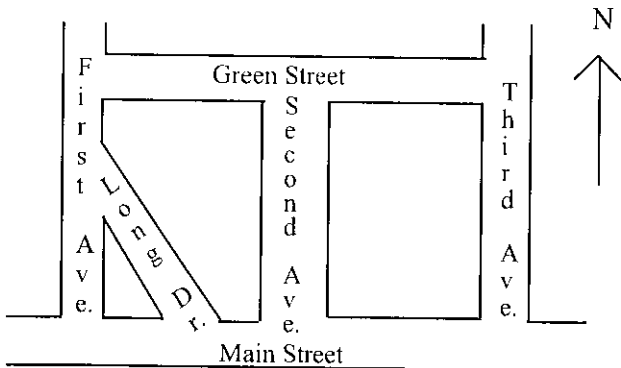
*Sometimes mathematical ideas are hard to think about without something to look at or to move around. Drawing a picture or using objects or models helps your brain "see" the details, organize the information, and carry out the action in the problem. Beans, pennies, tooth-picks, pebbles, and cubes are 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?

## MathStars Home Hints

Remember when you had "Show and Tell" in kindergarten? Now you have a great deal to share in mathematics. Talk to the folks at home about what you are learning. Show them your papers and tell them about what is happening in your math class. Let them see that you are doing problems in class similar to these. Each week choose an assignment that you are proud of and display it at your house.

- ★★★ 5. Below is a map of Centerville. Use it to answer the questions below it.



Name a road that is perpendicular to Main Street

\_\_\_\_\_

Name a road that is parallel to Main Street

\_\_\_\_\_

If you drove east on Main Street, which way would you turn to enter Second Avenue?

\_\_\_\_\_

- ★ 6. Complete the following to make a true subtraction example.

$$\begin{array}{r} 406 \square 9 \\ - \square 2 \square 98 \\ \hline 18031 \end{array}$$

- ★★★ 7. List the possible pizza combinations Mary Beth can pick that have only one topping. List the combinations using letters. The first one is done for you.

### Size

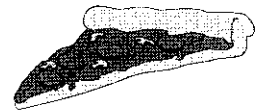
- A. small
- B. medium
- C. large

### Crust

- D. thick
- E. thin
- F. pan

### Toppings

- G. cheese
- H. pepperoni
- I. hamburger



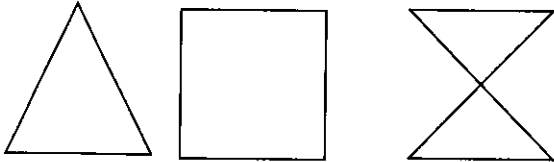
Possible combinations: ADG,

- ★★★ 8. There are five people at a meeting. If each person shakes hands with each of the others once, how many handshakes are exchanged?

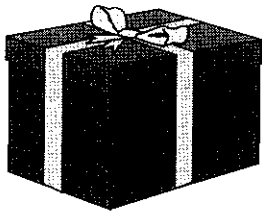
## Setting Personal Goals

Mathematics is all around us. We use it every day in personal living and in all of our school work. When we read graphs in social studies, gather and use data in science investigations, or count in music or physical education, we are using mathematics. We make connections in our math classes also, for example, measurement skills help us in solving many geometry problems, and classification skills help us in organizing data. We use computation in many different situations. You will become a stronger mathematics student by making connections.

★★★ 1. Show how the shapes below can be divided into four congruent triangles.



★★ 2. Julie wants to order a present from a catalog for Marcie's birthday on April 14. If delivery takes four weeks, what is the latest date she can order the present for it to arrive on the 14th?



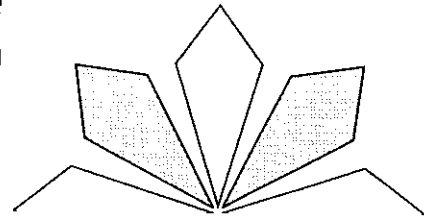
★ 3. What is missing in this pattern?

$$\frac{2}{5}, \frac{4}{10}, \frac{6}{15}, \underline{\hspace{1cm}}, \frac{10}{25}$$

★★★ 4. One section of a book contains five pages. The sum of all the page numbers in the section is 125. What are the page numbers?

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

★★★ 5. The drawings below are erased at their line of symmetry. Complete the drawings by drawing the missing parts.



## 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:*

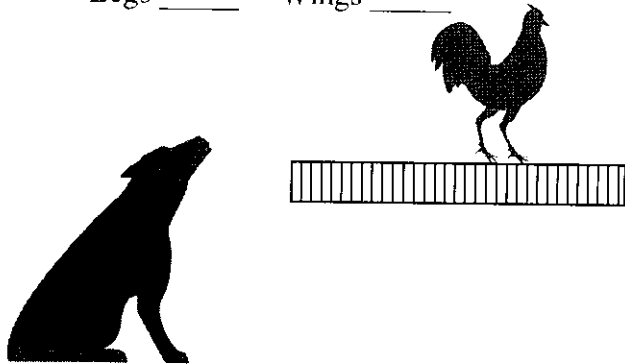
A school cafeteria sells popsicles for 50¢, nutty buddies for 80¢, and ice cream sandwiches for 60¢. If a student spent \$6.00 in May for frozen snacks, what could the student have purchased?

## MathStars Home Hints

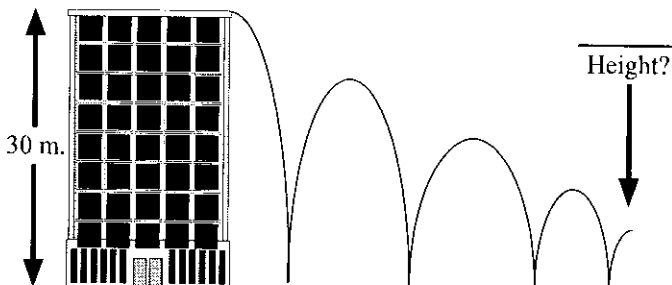
*Everyone learns from sharing, and you can teach others about the new mathematics ideas you are learning. Show someone at home the work you are doing in school and explain how you figured out the problems. Become the teacher and help a younger student. Explain what you have learned and what else you want to know. Good teachers set goals and evaluate the progress made toward reaching these goals. You will continue to be a learner whenever you become a teacher.*

- ★★★ 6. Old MacDonald had a farm. On this farm he had 3 ducks, 15 chickens, 4 mice, 17 cows, 5 horses, and 2 dogs. How many legs and wings were on his 46 animals?

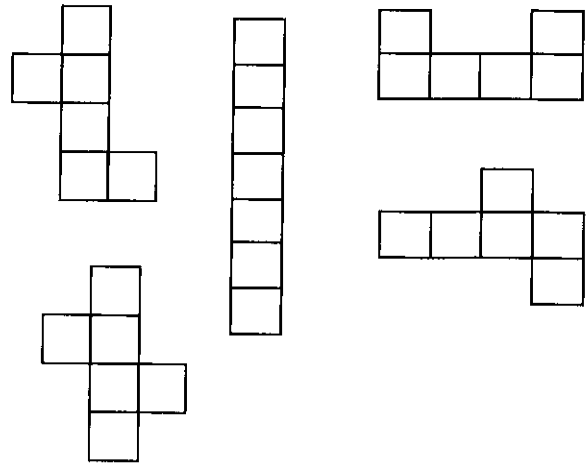
Legs \_\_\_\_\_ Wings \_\_\_\_\_



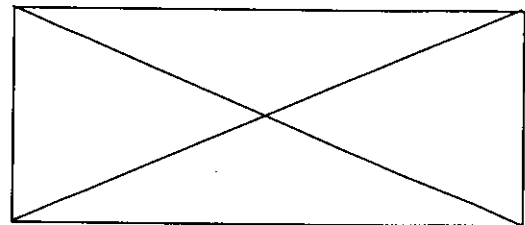
- ★★★★ 7. Roy bought a ball that bounces exactly half the height from which it is dropped. He drops it from the top of a building that is 30 meters tall. How high will the ball bounce after its fourth bounce? You may choose to use a calculator for this one.



- ★★ 8. Circle the figures below which would fold up into a cube if you cut them out and folded on the lines shown. You might draw these and practice folding to check your answer.



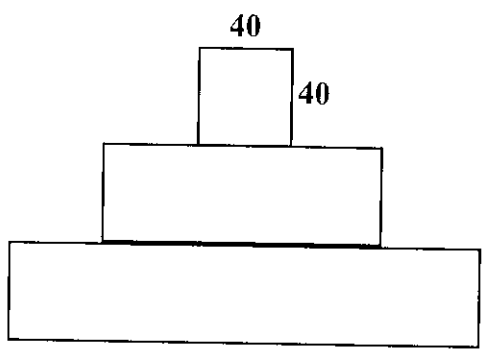
- ★★ 9. This quadrilateral has two diagonals. What polygon has 20 diagonals?



## Setting Personal Goals

*Perseverance means that you do not give up easily. Good problem solvers try different strategies when they are stumped and are not discouraged when they cannot find an answer quickly. They stick to the task, using all of their previous experiences to make connections with what they know and the problem they are trying to solve. If something does not work, they discard the unsuccessful strategy and try again using a different strategy.*

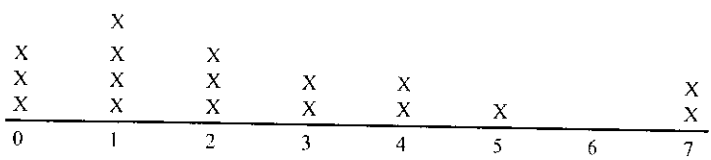
★★★ 1. Label each line segment with its missing length. Two are given for you.



★★ 3. Farmer Greene is building a fence. He places 15 fence posts 8 ft. apart. What is the distance from the first fence post to the last?

★★★ 4. If you write the numbers from 1 to 99, how many times would you write the digit 1?

★★★★ 2. Students made a line plot of the number of pets they had at home.



How many pets are there altogether? \_\_\_\_\_

What is the median number of pets? \_\_\_\_\_

What is the mode? \_\_\_\_\_

How many students participated in this survey? \_\_\_\_\_

### 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.

## MathStars Home Hints

*Calculators are important tools. They do not replace mathematical thinking; you must tell the calculator what numbers and operations to use. Calculators allow students to focus their energies on solving problems and to easily try alternative solutions. They also allow students to solve problems that were too difficult for pencil and paper. Number sense and good estimation skills are important when students use technology to carry out computations. Explore some "what if" situations with the calculator. "What if the cost of soda goes up 4¢... What if we travel 547 miles for 4 days..."*

★★ 5. Jesse wants to make a pot of tomato soup that holds eight bowls. To make two bowls, he needs two tomatoes, 1 1/2 cups of milk, and 1/2 teaspoon salt. How much of each ingredient will he need for his pot? Jesse made a drawing to help him figure this out. What would his drawing look like?

Tomatoes \_\_\_ Milk \_\_\_ cups Salt \_\_\_ teaspoons

★★★ 6. In the problem above, how much of each ingredient would Jesse need if he were making 80 bowls of soup?

Tomatoes \_\_\_ Milk \_\_\_ cups Salt \_\_\_ teaspoons

★ 7. In a fourth-grade class, two out of four students bring their lunches to school. There are 28 students in this class. How many students in the class bring their lunches to school?

★★★ 8. Round off each amount to the nearest dime.

\$.59 \_\_\_\_\_ \$.46 \_\_\_\_\_ \$.21 \_\_\_\_\_

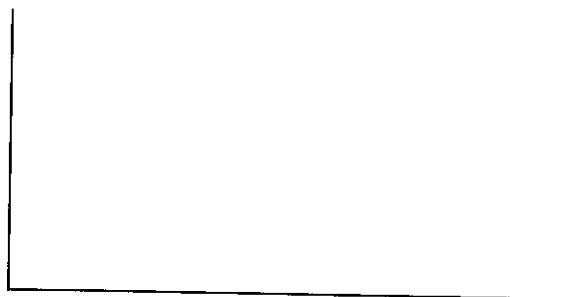
\$.68 \_\_\_\_\_ \$.74 \_\_\_\_\_ \$.87 \_\_\_\_\_

★★★ 9. It takes Jerry 12 steps to go across the classroom. It takes Mary 16 steps. If Jerry has taken nine steps, how many steps has Mary taken?

## Setting Personal Goals

*Accuracy is very important to everyone. Pharmacists must always measure accurately when preparing prescriptions and carpenters must cut supporting boards precisely to fit. Careless mistakes may be avoided in the classroom by computing carefully, checking back over work, and writing numbers clearly and neatly. If work is worth doing, it is worth doing well.*

★★★ 1. Hop in place for 10 seconds while counting the number of hops. Wait 5 seconds and repeat. Record the number of hops for 5 trials. Make a bar graph of the results; be sure to title and label your graph.



★★ 4. Fill in the chart:

Number A	Number B	Sum	Product
		15	36
	3		27
9		21	

★★ 2. Mary is ironing shirts for her father. He pays her 50¢ for the first shirt and increases her pay by 25¢ per shirt. How many shirts will she have to iron to earn \$5.00? \_\_\_\_\_

★★★★ 3. Sam, Nancy, Becky and Jimmy all eat lunch in the same restaurant. All of them are eating there today and Sam eats there every day. Nancy eats there every other day, Becky eats there every third day and Jimmy eats there every fourth day.

The next time they are all together in this restaurant they will have a big celebration. How many days from today will the celebration take place? \_\_\_\_\_ days.

### 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?

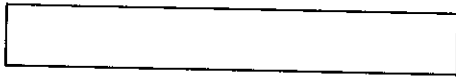
## MathStars Home Hints

*Math skills develop as you apply concepts learned in school to real life situations.*

*Which product is the best buy? How many tiles will it take to cover the kitchen floor?*

*What time should we start baking the turkey so that we can have dinner at 7p.m.? What do the statistics tell us about the two baseball players?*

- ★★ 5. Jordan plans to cut a board into equal-sized pieces by making 12 cuts in the board. There will be a 10-inch interval between cuts. How long is the board?



- ★★★ 6. List the amount of each of the ingredients if the following recipe is tripled.

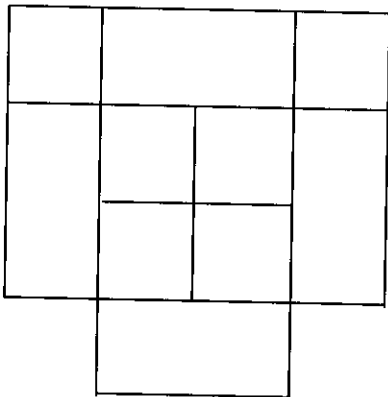
### PLAY DOUGH

Mix together:

- 1 1/2 cups flour
- 1 1/3 cups water
- 1 1/4 tsp. cream of tartar
- 3/4 Tbsp. oil

Cook at medium heat until it turns solid.

- ★★ 7. How many different squares are in this picture?



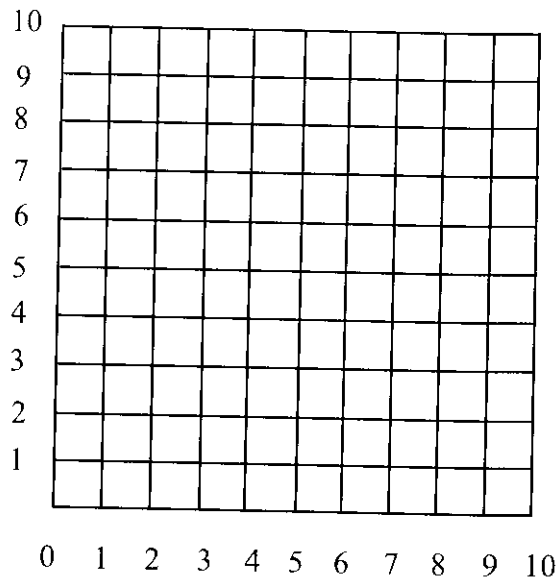
- ★ 8. What is the closest estimated answer to this problem?

$$\begin{array}{r} 43 \\ + 8 \\ \hline 59 \end{array}$$

- a. 12,000
- b. 13,000
- c. 14,000

- ★★ 9. Begin at (9,6) to find a mystery dot-to-dot picture. Draw it by connecting in order with straight line segments the points having the given coordinates.

(9,6) (1,6) (8,1) (5,9) (2,1) (9,6)



## Setting Personal Goals

*Confidence means that you believe in yourself. You can become a more confident problem solver by learning to use a variety of strategies. If your first idea does not work, don't give up just try another way! Working with a buddy also helps. You need to remember that there is usually more than one way to solve a problem and that practice always helps us learn.*

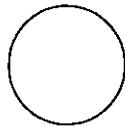




## MathStars Home Hints

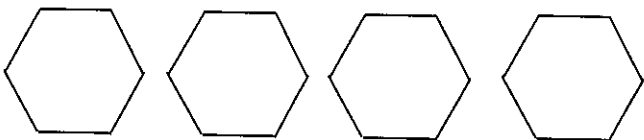
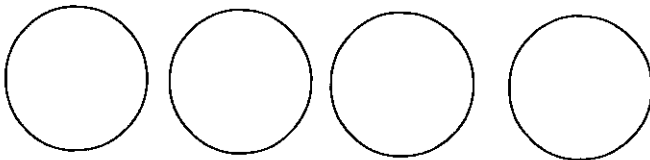
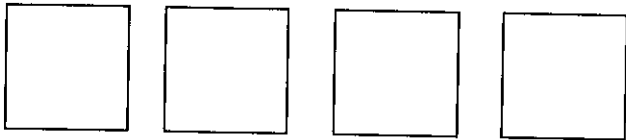
*Mathematics can make life easier for you when you become a good estimator. Spatial estimation helps you plan how you will rearrange your furniture or how far to jump to cross a puddle of water. Using estimation helps you know if you have enough money for your purchases before you get to the check-out line. We become good estimators by practicing. Use your number sense and spatial sense to think about what the answers to problems will be before you start to solve them.*

- ★ 5. Mental Math: Add the even numbers between 2 and 14. Put your answer in the circle.

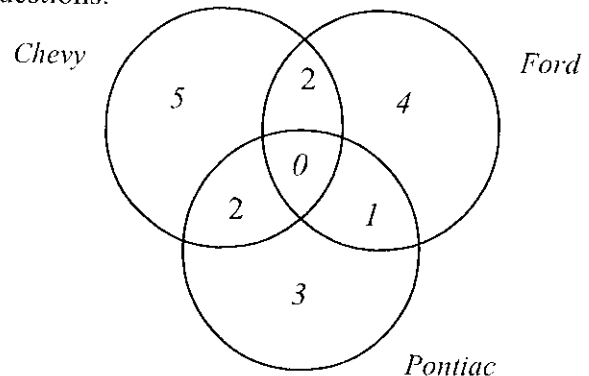


- ★★ 6. Draw line segments to show these parts.

HALVES   THIRDS   QUARTERS   SIXTHS



- ★★★ 7. The students in Ms. Ortega's class took a survey to find out about their favorite race cars. Then they made a Venn diagram of this information. Use the Venn diagram to answer the questions.



How many in the class like only Chevys? \_\_\_\_\_

How many like Fords? \_\_\_\_\_

How many like all three? \_\_\_\_\_

- ★★★ 8. Michael Jordan scored 39 points against the Knicks in one game. He didn't score any foul shots. Find 6 combinations of 2- and 3-point shots he could have made; he did score at least one of each shot. Fill in the table below to organize your answers.

TWO-POINT SHOTS	THREE-POINT SHOTS

## Setting Personal Goals

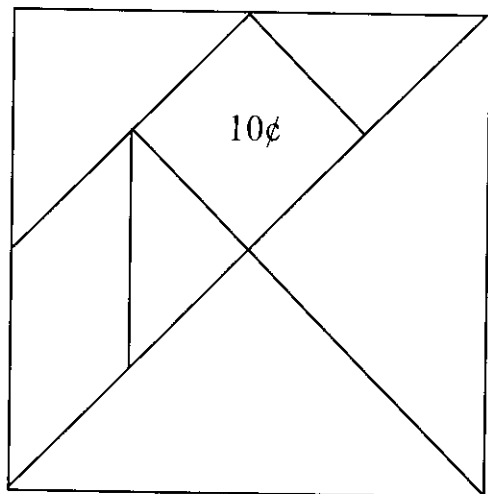
*When you encounter a new situation, you use all of your previous experiences to figure out the current problem. Reasoning mathematically means using your brain power to think logically and sequentially, to put prior knowledge with new information. Set the goal of developing mathematical power and use your thinking power to achieve the goal!*

★ 1. Place the missing digits in the boxes below.

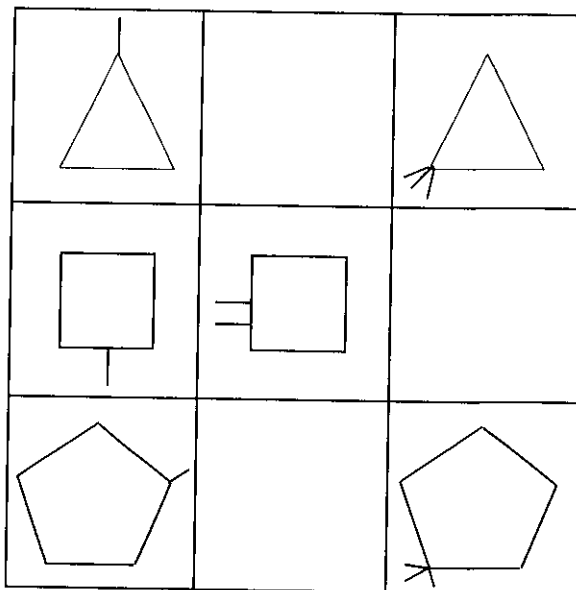
$$\begin{array}{r}
 3, \square 8 6 \\
 1 \square 2 \\
 + \square, 6 7 \square \\
 \hline
 8, 1 5 5
 \end{array}$$

★★ 2. Nine years ago a 10-ounce candy bar cost 25¢. That same candy bar costs twice as much now. How much does the candy bar cost per ounce now? \_\_\_\_\_

★★ 3. Use the Tangram puzzle below. Suppose the square costs 10¢, how much will the other pieces cost? Put your answers inside each piece.



★★★ 4. Draw the missing shapes in the boxes below.



## Strategy of the Month

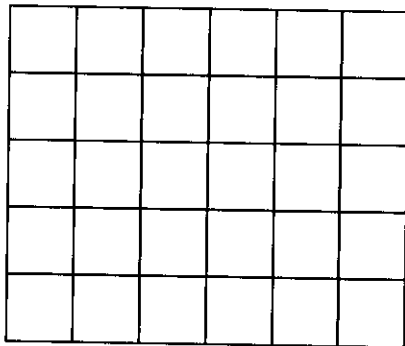
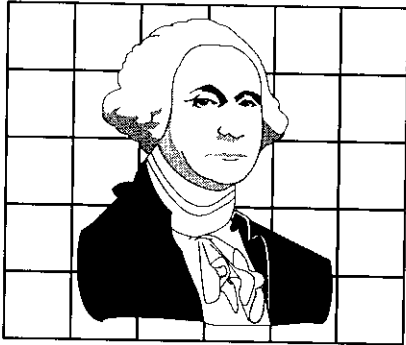
*What if you know the result of a situation, but you don't know the beginning? For example, you might know that you end up with thirteen baseball cards after doing a certain number of trades and you want to figure out how many cards you had before the trading started. In that case you need to work backwards; you have to think about your actions in reverse order. This strategy works for any sequence of actions when you know the end result rather than the starting place. Try **working backwards** to solve this problem:*

Jo gave a number problem to Nelda. She told her to pick a number, add 10 to it, double that sum, and then subtract 5. Nelda's answer was 39. What number did she start with?

## Math Stars Home Hints

*Mathematics can make life easier for you when you become a good estimator. Spatial estimation helps you plan how you will rearrange your furniture or how far to jump to cross a puddle of water. Using estimation helps you know whether you have enough money for your purchases before you get to the check-out line. We become good estimators by practicing. Use your number sense and spatial sense to think about what the answers to problems will be before you start to solve them.*

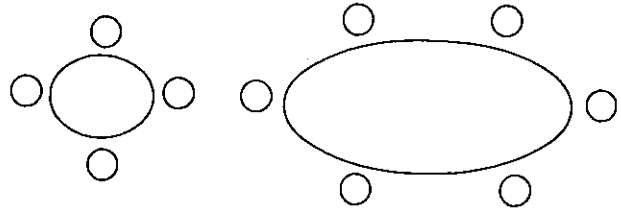
★★★ 5. Copy the drawing below using the given grid.



★★★★ 6. In the school library 26 students can sit at the 5 tables with no empty seats. There are small tables for 4 people and large tables for 6 people.

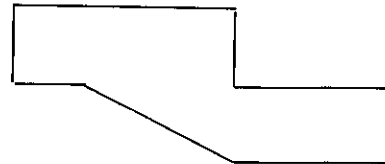
A. How many small tables are in the library? \_\_\_\_\_

B. How many large tables are in the library? \_\_\_\_\_

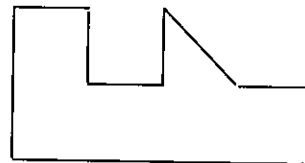


★★★ 7. For each figure below circle the best estimate of the area of the figure. Hint: Place some  $\text{cm}^2$  graph paper over the figure or "draw in" some square centimeters.

- A.  $4 \text{ cm}^2$
- B.  $5 \text{ cm}^2$
- C.  $6 \text{ cm}^2$



- A.  $4.5 \text{ cm}^2$
- B.  $5.5 \text{ cm}^2$
- C.  $6.5 \text{ cm}^2$



## Setting Personal Goals

*When you encounter a new situation, you use all of your previous experiences to figure out the current problem. Reasoning mathematically means using your brain power to think logically and sequentially, to put prior knowledge with new information. Set the goal of developing mathematical power and use your thinking power to achieve the goal!*