Manatee Math Superstars

Grade 5

Spring Semester

MANATEE ELEMENTARY

Adapted for Math Superstars
Week 1

*Name:*_____
(This shows my own thinking.)

★★★★ 1. A worm is at the bottom of a 10 foot hill. He crawls up the hill $4\frac{1}{2}$ feet a day. At night when he rest he slides down $2\frac{1}{2}$ feet. How long does it take the worm to crawl up the hill? (Hint: Draw a picture.)

Answer: _____ days

★★★ 2. Jennifer was shopping, and using a calculator to find the price of a can of soda. She got the number shown on the display, but didn't know exactly how much money that was. How much money would the can of soda cost? Circle the best answer below.

(a) $6

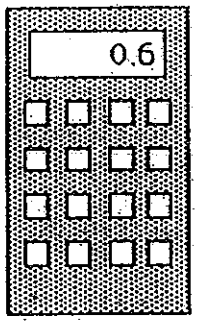
(b) $.06

(c) $0.60

(d) 60¢

(e) 0.60¢

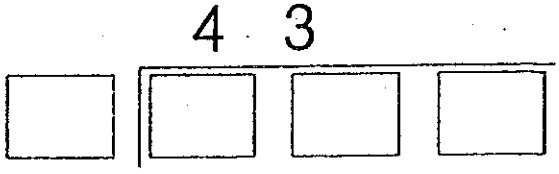
(f) both (c) and (d) above



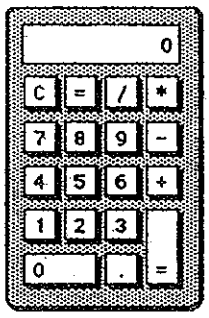
★ 3. If the 9th day of a month is on Tuesday, on what day is the 25th?

Answer: _____

★★★ 4. Put one digit from {1, 0, 3, 7} in each box to get the correct long division problem.



★ 5. Use this calculator in geometry. Circle two sides you could use to draw a set of *parallel* lines.



★★ 6. Use a ruler and measure the pencil below to the nearest millimeter.

Answer: _____mm

★★★★ 7. Mrs. Jones had some white paint and some green paint, and a bunch of wooden cubes. Her class decided to paint the cubes by making each face either solid white or green. Juan painted his cube with all 6 faces white--Julie painted her cube solid green. Hector painted 4 faces white and 2 faces green. How many cubes could be painted in the fashion, so that each cube is different from the others? Two cubes are alike if one can be turned so that it exactly matches, color for color on each side, the other cube.

Answer: _____ cubes can be painted so they are different

★ 8. Letia bought a milk shake at the ice cream shop, and gave the clerk a $10 bill. She got $9.61 in change. Is this reasonable? Why or why not?

Answer: _____

★★★ 9. The sum of my two digits is 13. I am not divisible by 2. List all possible numbers I could be.

Answer: _____

Adapted for Math Superstars
Week 2

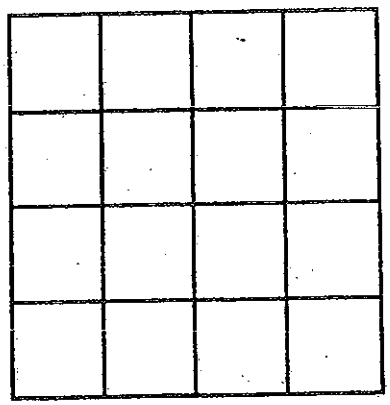
Name:_____
(This shows my own thinking.)

★★★ 1. Use each of these digits one time in the number sentence below: 2, 4, 6, and 8. Fill in the blanks to produce the answer "14." Remember that you compute inside parentheses first.

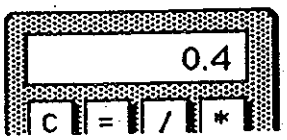
(___ ÷ ___) + (___ × ___) = 14

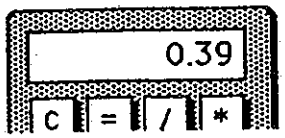
★★ 2. How many squares can be found in the figure to the right?

Answer: _____ squares



★ 3. Tamisha did a problem two different ways on her calculator. She got two different answers. Which of the two answers below represents the largest number? Circle it.





★★ 4. The girl scouts were going on a field trip to the zoo. There are 25 people going. They rented vans and each van has only 7 seat belts. How many vans do they need?

Answer: _____ vans

★ 5. Write the standard numeral: 9000 + 700 + 8 + 0.6 = _____

★★★★ 6. What do you know about metrics? Circle the answers below that would make sense.

a. The weight of a pineapple:	1 kg	1 g	1 mg
b. The capacity of a can of soda:	35 mL	3.5 mL	350 mL
c. The temperature on a summer day:	30° C	3° C	- 3° C
d. The distance from New York to Miami:	2200 cm	2200 km	2200 mm

★★★ 7. A class of 25 students has 10 boys. Three boys have braces and 4 girls have braces.

a. What is the ratio of boys with braces to boys in class?
_____

b. What is the ratio of girls with braces to girls in class?
_____

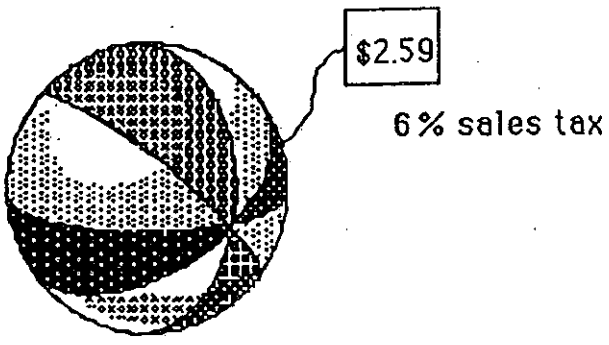
c. Which group has the largest ratio of students with braces to students in class -- boys or girls? _____

★★★★ 8. The price and the sales tax are given. Compute the total cost. Tell how much change you would receive from $5.00.

Answer: _____ Total Cost

Answer: _____Change

Beach Ball



Adapted for Math Superstars
Week 3

*Name:*_____
(This shows my own thinking.)

☆☆ 1. Toni works in the school store. She sold 36 notebooks and 42 book covers. The notebooks cost $2.38 each, and the book covers cost $1.75 each. What is the total cost of Toni's sales?

Answer: _____

☆ 2. A lot of students like to ride horses. Use the chart below to compare the primary grade riders (grades 1-3) with the intermediate grade riders. What is the difference in the number of riders between these two groups?

Horseback Riders

1st Grade	Ω Ω Ω Ω
2nd Grade	Ω Ω Ω Ω Ω
3rd Grade	Ω Ω
4th Grade	Ω
5th Grade	Ω Ω Ω Ω Ω Ω Ω Ω

Key: Each Ω = 3 students

Answer: _____

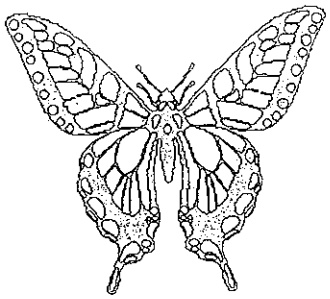
☆☆ 3. You have $100. You spend $\frac{1}{4}$ of your money to buy a new pair of jeans. You want to save $\frac{1}{5}$ of what you have left. How much will you save?

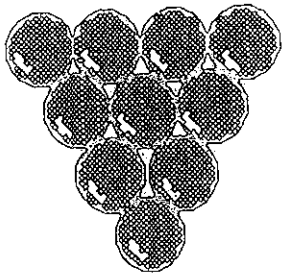
Answer: _____

☆☆☆ 4. Use these digits only once: 1, 2, 4, and 8. Write a number sentence and use any of the operations (+, ☆, ×, ÷) as many times as you like. You must get 0 as an answer. Use parentheses if you like.

Answer: My number sentence is: _____

☆☆ 5. Draw all the *lines of symmetry* of the figures below.



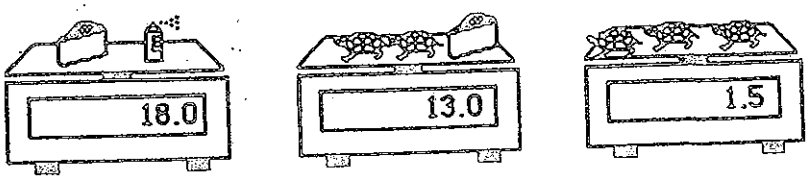


☆ 6. Below is a *line of symmetry*. Draw a figure around it for which the line is a *line of symmetry*.

☆☆☆ 7. Students arrived for school in groups. Bill was the first to arrive--consider him the "first group". Each group that arrived after Bill had two more people than the group that arrived before it. How many people were in school after 20 groups arrived?

Answer: _____

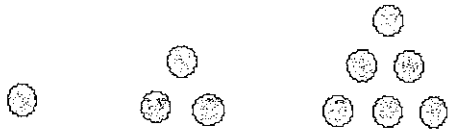
☆ 8. How much does the can of paint weigh, by itself? Answer: ____



Adapted for Math Superstars
Week 4

Name: _____
(This shows my own thinking.)

☆☆ 1. One, three, and six are triangular numbers. List all the other triangular numbers up to 36.

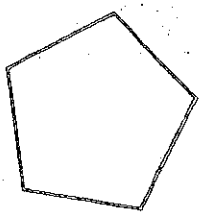


Answer: _____

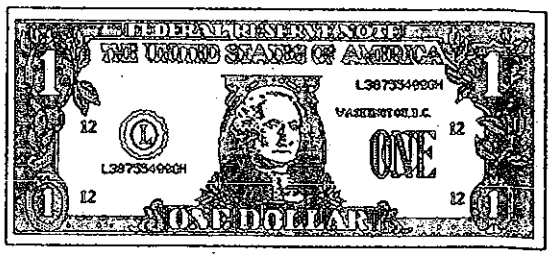
☆ 2. Jennifer earns $5.25 an hour. Starting Monday she will get a raise to $5.85 an hour. She works 40 hours each week. How much more will she make next week than she made last week?

Answer: _____

☆☆ 3. A diagonal joins two vertices of a polygon. Draw all the diagonals in the polygon to the right.



☆☆ 4. Marti plans to save 25% of the money she makes over the summer washing cars.



a. Shade in about 25% of the figure to the right to show how much she will save from every dollar she earns.

b. How much will Marti save for each car she washes for $5?

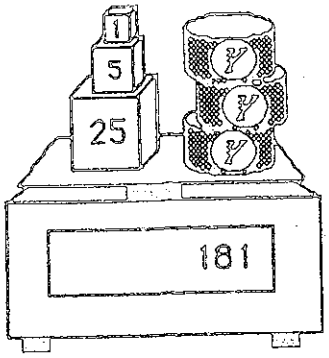
_____

☆☆ 5. The Phillips family wants to fence their backyard. They know the yard has a perimeter of 24 meters, and an area of 32 square meters. What is the yard's length and width?

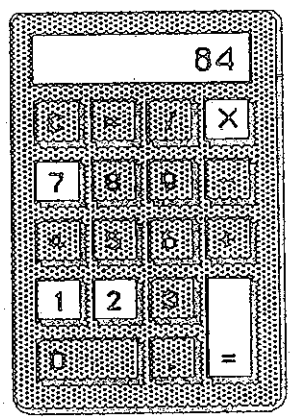
Answer: The length is _____meters, and the width is _____ meters.

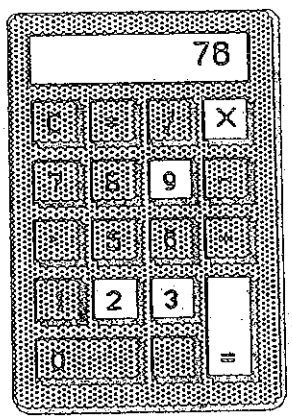
☆☆☆ 6. *Y* stands for the weight of 1 can of tuna fish on the scale. Find *Y*.

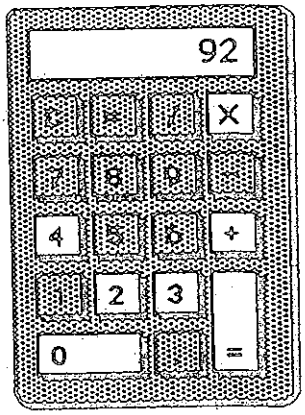
Answer: *Y* = _____



☆☆☆ 7. Write the problems and answers below each calculator:

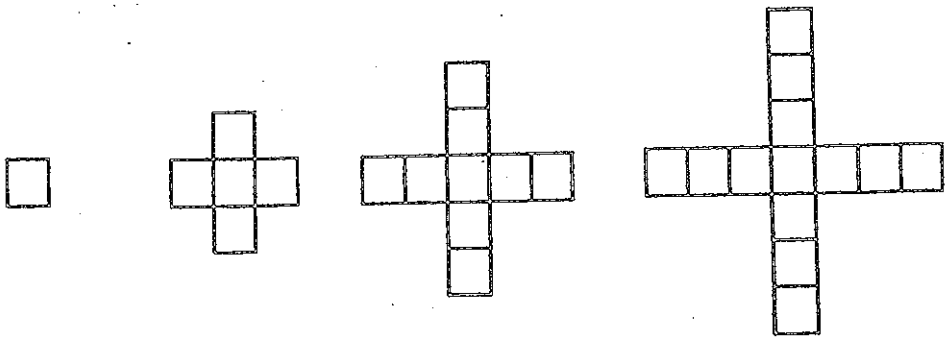






_____ = _____ _____ = _____ _____ = _____

☆☆ 8. Look at the pattern below. How many squares would be in the 10th shape in the pattern?



Answer: _____ squares

Adapted for Math Superstars
Week 5

Name: _____
(This shows my own thinking.)

☆☆ 1. Big Al has a set of non-metric wrenches that have these numbers on the end:

$\frac{7}{16}$ $\frac{1}{4}$ $\frac{9}{16}$ $\frac{3}{8}$ $\frac{5}{16}$ $\frac{1}{2}$

Which of his wrenches fits the largest nut? Which fits the smallest nut?

Answer: _____ fits the largest

_____ fits the smallest

☆☆☆ 2. Jennifer bought a blender for her mother. The blender was on sale for $\frac{1}{3}$ off the marked price. The regular price of the blender was $18.00. How much will she pay for the blender, including sales tax of 6% ?

Answer: _____

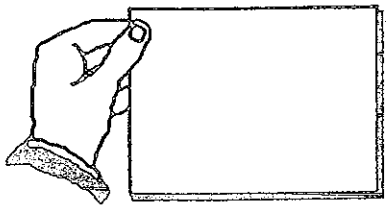
☆ 3. Melissa and Sarah arranged the music hall for a concert. They made 42 rows with 35 chairs in each row, and 12 rows with 25 chairs per row. How many chairs did they use in all?

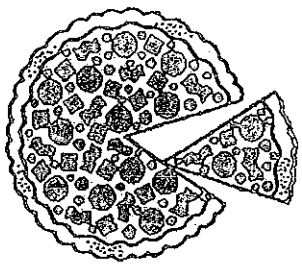
Answer: _____ chairs

☆☆ 4. The "square corners" on a sheet of writing paper are 90 degree angles. You can use these corners to estimate the measure of other angles.

About what is the angle of the piece of pizza being removed in the picture?

Answer: ____ degrees





☆☆ 5. In the month of April 9.45 inches of rain fell in Tallahassee. During the month of May 9.6 inches of rainfall fell. Which month had the most rainfall, and what was the total for the two months?

Answer: _____ had the most; the total was _____ inches

☆ 6. Complete the addition. Convert your answer to smallest units. (i.e., change inches into feet and feet into yards, if possible)

2 yd. 2 ft. 3 in.
+ 1 yd. 2 ft. 11 in.

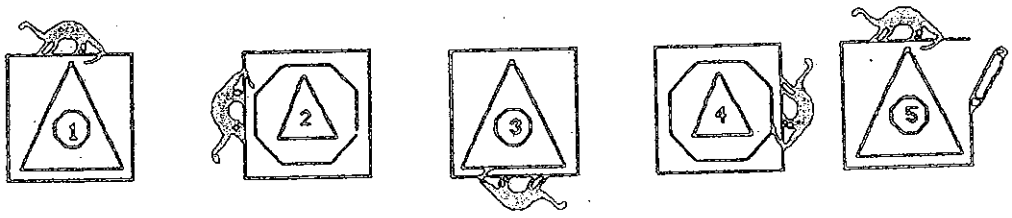
☆☆☆ 7. Eli's Dad made him a birthday cake, but forgot to buy candles. He could only find a few. But Eli was smart in math, so his Dad said "the ratio of candles to years is 3 to 5." That gave him the right number.

How old was Eli? _____

☆☆☆ 8. Kenya, Matt, Tia, and Justin live on the same street. Their houses are gray, green, blue, and white, but not necessarily in that order. Justin lives next door to the grey house. Matt and Justin live across the street from the green house. Tia's house is blue. Circle the one who lives in the white house.

a. Kenya b. Matt c. Tia d. Justin

☆☆☆ 9. Answer the questions after studying this pattern. Notice when the pattern starts repeating.



a. Circle the figure above that would be the same as figure 15 in the pattern.

b. List the numbers of 5 figures not shown that would be just like number 1:

_____

c. What is the number of the figure above that is just like the 100th figure in line? ____

Adapted for Math Superstars
Week 6

Name: _____
(This shows my own thinking.)

☆☆☆ 1. Write true, sometimes, or false.

a. Perpendicular lines intersect. _____

b. Two sides of a triangle are parallel. _____

c. Two lines that are parallel to the same line are parallel to each other. _____

☆☆ 2. Solve:
$9 \div (1 + 2) + 9 \div 3 = ?$

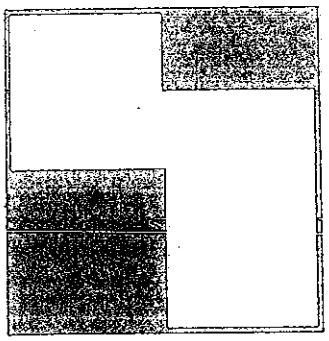
Answer: _____

☆ 3. Lisa and Sandy were comparing sticks. Lisa's stick was $\frac{2}{3}$ of a yard long. Sandy's stick was $1\frac{10}{12}$ of a foot long. Who's stick was the longest, and by how much?

Answer: _____ was longer, by _____.

☆☆☆☆ 4. What fraction of the large square is shaded?

Answer: ____ is shaded



☆☆ 5. Adrienne left home at 8 a.m.. She arrived in Los Angeles at 1:28 p.m.. Her friend Erica left home at 10 a.m.. She arrived in Los Angeles at 2:45 p.m.. Assume they are in the same time zone the whole trip. Altogether, how many hours did Adrienne and Erica spend traveling?

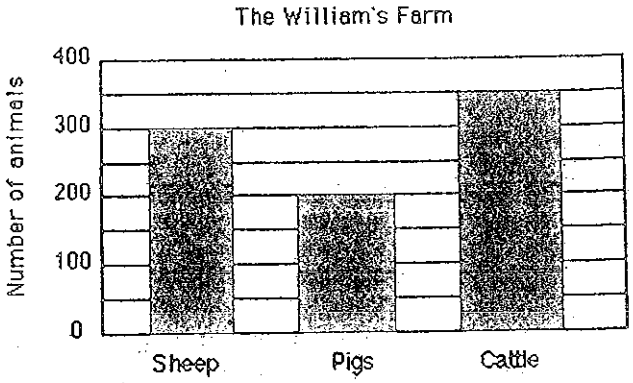
Answer: _____ hours, _____ minutes

☆☆☆ 6. Use the following graph to answer these questions.

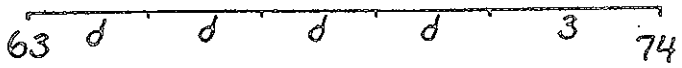
a. What is the total number of animals on the Williams' farm? _____

b. What is the difference in the number of cattle and the number of pigs?
_____

c. How many more pigs do they need to equal the total number of cattle and sheep? _____



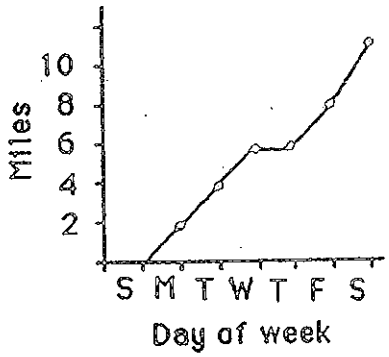
☆☆☆ 7. Maria's bike odometer read 63 miles. She rode her bike to school and back 4 days last week. On Saturday she rode to the park and back, a total distance of 3 miles. At the end of those five trips, her odometer showed 74 miles. Find the distance *d* from her house to school and back. You can find *d* by using your number sense and the diagram below.



Answer: *d* =_____ miles

☆☆ 8. Maria made a graph of the distance she travelled last week on her bike. Which day of the week did she not ride her bike to school?

Answer: _____



☆☆ 9. There are 34 classes in a school and each class could have between 23 and 30 children.

a) What is the school's highest possible student population? _____
b) What is the school's lowest possible student population? _____

Adapted for Math Superstars
Week 8

Name: _____
(This shows my own thinking.)

☆☆ 1. What is the sum of these mixed numbers? $5\frac{2}{3},\ 3\frac{3}{4},\ 13\frac{1}{6},\ 8\frac{1}{2}$

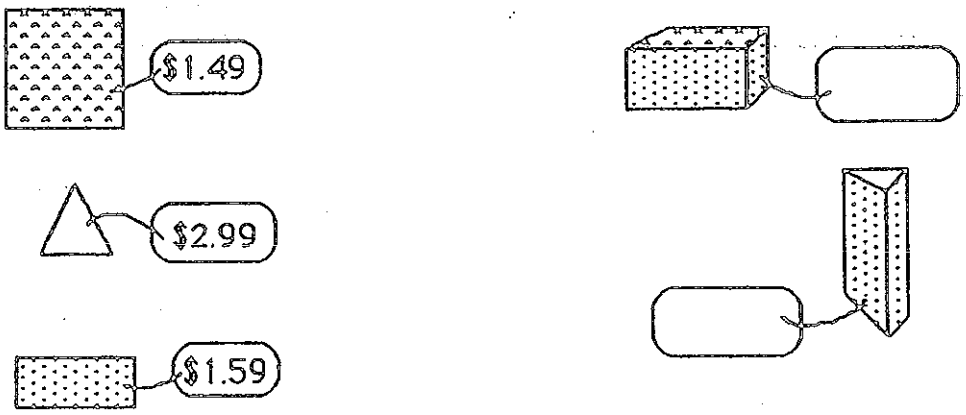
Answer: _____

☆☆☆ 2. Artesia found a sale on skates. She got $\frac{1}{5}$ off the regular price of $34.50. What was the sale price of her skates?

Sale on skates!

Answer: $_____

☆☆☆ 3. John needed two more shapes to complete his project. How much will each shape cost? Compute the cost of each shape using the key -- write the cost on each tag.



☆☆☆☆ 4. Put >, <, or = between each pair of numbers.

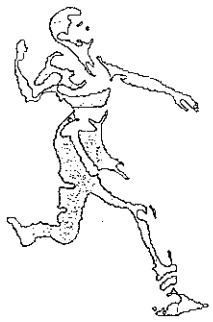
a. 34.63 ____ $34\frac{1}{2}$

b. $3\frac{2}{5}$ ____ $1\frac{12}{5}$

c. 12.443 ____ 1.2443

d. 0.09 ____ 0.9

☆☆ 5. Mike and Sam are running a 26 mile marathon. They started out at 8:15 a.m.. They both crossed the finish line at 1:26 p.m.. How long did it take them to finish the race?



Answer: _____ hours and _____ minutes

☆☆☆ 6. a. How many $1 bills are in $1,000,000? _____

b. How many $100 bills are in $1,000,000? _____

c. How many $1,000 bills are in $1,000,000? _____

☆☆☆☆ 7. Find the numbers that each letter stands for in the problem below.

EFGH
x 4
HGFE

E =_____

F =_____

G =_____

H =_____

☆ 8. Jim was putting carpet in his son's tree house. He needed to find the area of the floor. But he was having trouble with the multiplication. The measurements where 4.2 meters by 6.3 meters. Do the multiplication to help him find the area.

Answer: _____meters^2

☆☆ 9. Rewrite this riddle so it's easily understood.

The middle 3/5 of SHOWS.	The middle 1/5 of TRAPS.
The first 1/3 of DOODLE.	The first 6/6 of TURKEY.
The first 3/5 of YOURS.	The middle 1/2 of PINS.
The first 1/2 of KEEPSAKE.	The first 8/11 of SUSPENSEFUL.

Answer: The riddle is: _____

A good answer to the riddle might be:

_____

Adapted for Math Superstars
Week 9

Name: _____
(This shows my own thinking.)

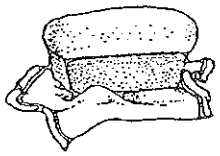
☆☆ 1. Sandra has eight coins which total $0.87. What coins does she have? (Hint: make a chart or a list.)

Answer : _____

☆☆ 2. Practice doing some problems like this. You will be given one when you turn in your paper, and you can only write the answer down. You'll have to use mental math.

Answer later: _____

Lonny has $15 to buy some groceries for his mom. Milk costs $2.39, bread costs $1.29, eggs cost $0.79, and mayonnaise costs $2.49. If he buys one of each item, can he expect to get $10 in change?
_____ (yes or no)



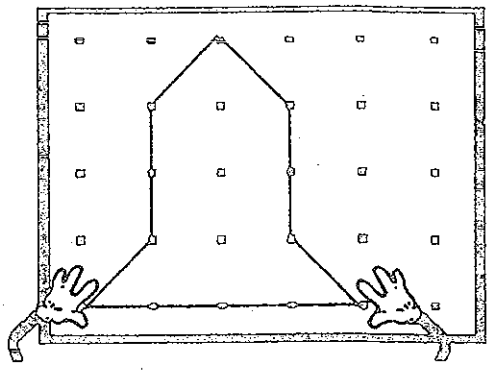
☆☆ 3. Jack wants to buy an equal number of green, blue and white ornaments for his holiday tree. Green ornaments come in packages of 3; blue ornaments come in packages of 6; the white ones come in packages of 4. What is the least number of packages of each color he must he buy?

Answer: ____ packages of green
____ packages of blue
____ packages of white

★★ 4. Mickey made a space ship on his geoboard.

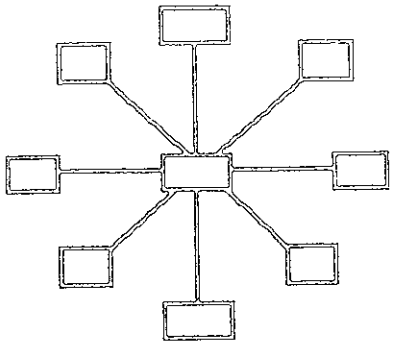
a. Draw any lines of symmetry on the space ship.

b. Find the area of the space ship by counting whole and partial square units.

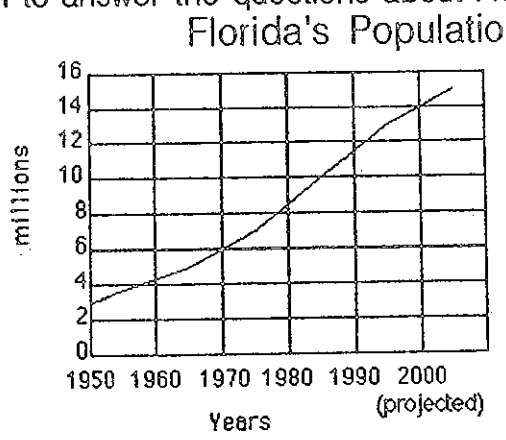


Answer: The area is _____ square units

☆☆☆ 5. Use each digit from 1 to 9 to make each line sum to 15. Use each digit only once.



☆☆☆ 6. Use the graph to answer the questions about Florida's growing population.



a. What is the increase in population from 1950 to 2000? _____

b. What was the approximate population in 1980? _____

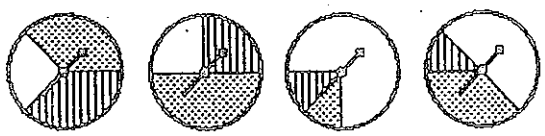
c. At the current rate of increase, what would the population to be in 2010? _____

☆☆☆ 7. Think about these spinners to answer the questions below.

(a) Put a ✓ on the spinner that gives the white team the best chance to win.

(b) What is the white team's chance of winning on the spinner with ✓? _____

(c) What is the chance the white team would <u>not</u> win, on the spinner with ✓? _____



Adapted for Math Superstars
Week 10

Name:_____
(This shows my own thinking.)

☆☆ 1. Jacqueline, Kanisha, Howard, and Billy have jobs in their group. The jobs are Recorder, Materials Manager, Time Keeper, and Reporter. Kanisha sits across from the Recorder and next to the Materials Manager. Billy hurt his hand and cannot record the work done. Jacqueline is best friends with the Reporter, and lives down the street from the Recorder. Billy rides the bus with both the Materials Manager and the Reporter. What is the task of each student?

_____ Recorder _____ Materials Manager

_____ Time Keeper _____ Reporter

☆☆ 2. A sheet of plywood measures 4 feet by 8 feet. Armand wants to build a dog house using one whole sheet of plywood for the floor.

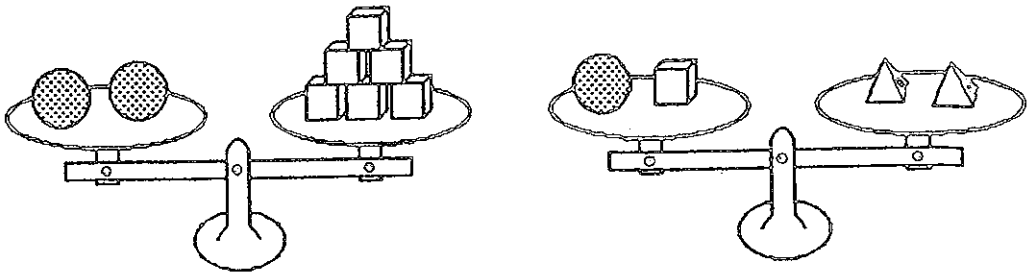
a. Armand needs to put a "2 by 4" under the outer edge all the way around the floor, and another "2 by 4" that runs down the middle lengthwise, to give support to the plywood. If "2 by 4's" are sold in 8-foot lengths, how many should he buy? ____

b. If he carpets the floor also, how many square feet of carpet should he buy? _____

☆☆☆ 3. Pine Elementary School Chorus needs tapes to record their musical for the members. Tapes cost $7.95 for a package of 2 tapes and $11.75 for a package of 3 tapes. If 23 members want copies of the tape, what is the least amount they will have to spend?

Answer: _____

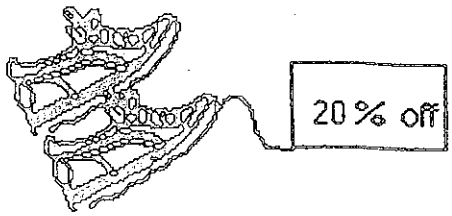
☆☆☆☆ 4. If each sphere has a mass of 120 gms, what is the mass of a pyramid?
_____ gms



☆☆ 5. Sunny Ridge Elementary School was collecting cans for a food drive. The first two days of the drive, they collected 103 cans. They collected 5 cans more on the first day than on the second day. How many cans did they collect each day?

Answer : _____ 1st day _____ 2nd day

☆ 6. Josie found a pair of shoes she wanted priced at $55, but she did not want to pay that much. A few weeks later, the same shoes were marked down 20%. Including the 6% sales tax, how much will she pay if she buys the shoes on sale?



Answer: _____

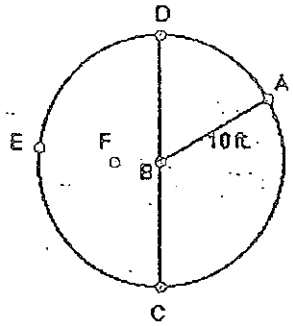
☆☆ 7. People who learn to multiply mentally usually do the opposite of what they do with paper-and-pencil. They start multiplying the "big numbers" first, and then add on the product of the smaller numbers. Watch James below:

To multiply 63 × 45, first multiply 60 × 40 to get 2400. Then add on 60 × 5 or 300, and you have 2700. Then add on 3 × 40 or 120, and you're up to 2820. Next add 3 × 5 or 15, and you have 2835. So 63 × 45 is 2835.

Practice multiplying this way with 2-digit by 2-digit multiplication problems that you make up. When you turn in your paper, you can earn 4 stars by doing a problem like this.

Answer later: _____

☆☆☆ 8. Circle the best answer for the length of each line segment.



$\overline{FE}$	12 ft.	10 ft.	8 ft.
$\overline{CD}$	15 ft.	30 ft.	20 ft.
$\overline{BF}$	5 ft.	4 ft.	1 ft.