Extended Response
Standard 4: Geometry
Standard 7: Problem Solving

Question 4

Jada created the table below to show how she sorted some polygons. Study each category in the table.

Category 1	Category 2	Category 3
equilateral triangle	right triangle	square
square	square	rectangle
rhombus	rectangle	rhombus
		parallelogram

Describe what the polygons in each category have in common.

Category 1 _____

_____

Category 2 _____

_____

Category 3 _____

_____

Use words, numbers, or symbols to explain why some of the polygons are in more than one category. Give TWO different examples from the table.

1) _____

_____

2) _____

_____

Use words, numbers, or symbols to explain in which category Jada should place a trapezoid if it were added to the table.

_____

_____

Question 3

Tina plays in a softball league. Two batting average records are shown below.

- League record: 0.308
- Team record: 0.260

Tina broke the team record this year. Tina's average is 0.017 HIGHER than the team record.

What is the difference between Tina's average and the league record?

Show All Work

Answer _____

Tina will move into a new softball league next year. The new league's batting average record is 0.040 HIGHER than Tina's average this year.

What is the new league's record?

Show All Work

Answer _____

Question 2

On the number line below, Anita is plotting the number of hours each person in her reading group read last week. The numbers represent the hours read.

How many hours did each person read?

Roy _____ hours

Mark _____ hours

Dee _____ hours

Cass _____ hours

Anita forgot to plot a point for the number of hours she read last week.

If the total number of hours read for the group is 23.75 hours, how many hours did Anita read?

Show All Work

Answer _____ hours

Question 1

For six months, Marvin has been saving money earned from chores. He earned a total of $45 for babysitting, $49 for yard work, and $22 for doing laundry.

With his savings, Marvin wants to buy the following items:

- board game $15.95
- books $23.84
- jeans $42.25
- video game $37.00

How much MORE money will Marvin need to buy all the items he wants?

Show All Work

Answer $ _____

Question 1

Randall Elementary School has a reading contest every year.
The number of pages each grade level read last year are listed below.

327,612   864,201   170,346   643,120   657,064

In the first row of the table, write the numbers in order from
GREATEST to LEAST.

Show All Work

Number of Pages Read					
Grade Level	4th				

Use the clues below to match the grade level with the number of
pages read. In the second row of the table, write the correct grade
level under the number of pages read.

- Students in 4th grade read the most pages.
- Students in 2nd grade read more pages than students in 3rd grade.
- Students in 2nd grade read fewer pages than students in 5th grade.
- Students in 3rd grade read more pages than students in 1st grade.

Question 2

Curtis went fishing.

- He caught one bass that weighed 8.32 pounds.
- He caught one catfish that weighed 3.675 pounds.
- He caught another catfish that weighed 3.14 pounds.
- The last fish Curtis caught was a trout.

How many MORE pounds did the ONE bass weigh than the TWO catfish combined?

Show All Work

Answer _____ pounds

If the TOTAL weight of all four fish Curtis caught was 18.5 pounds, how many pounds did the trout weigh?
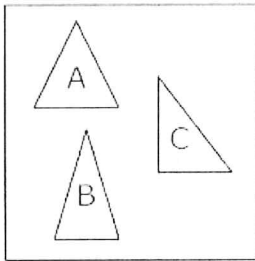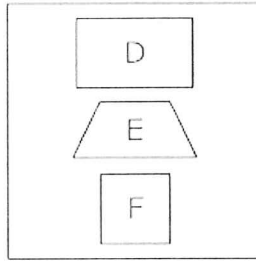
Show All Work

Answer _____ pounds

Question 3
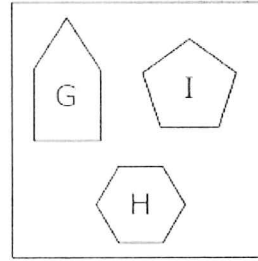
Look at how the shapes below are classified.

3 sides and only
acute angles

4 sides and
4 right angles

5 or 6 sides and
only obtuse angles

On the lines below, list the letter of the shape that is INCORRECTLY classified in each group. Explain why it does not belong in that group.
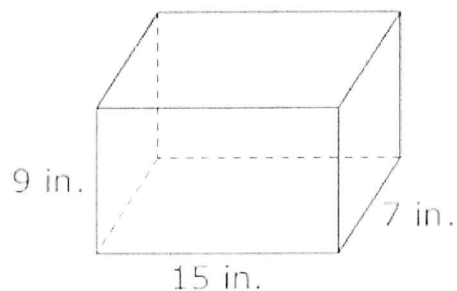
Shape _____ Why _____

_____

Shape _____ Why _____

_____

Shape _____ Why _____

_____

Which of the 3 shapes you listed WILL fit into a new group labeled "Polygons with only acute and right angles"?

Answer _____

Question 4

Janet has the flower box shown below.

9 in.

7 in.

15 in.

> Volume of rectangular prism = *lwh*
>
> = length × width × height

She only has enough soil to fill 500 cubic inches of the box.

How much MORE soil, in cubic inches, does Janet need to fill her flower box?

Show All Work

Answer _____ cubic inches

Robert has a flower box that has the SAME volume as Janet's but DIFFERENT measurements for length, width, and height.

If the length of Robert's flower box is 21 inches, what are possible width and height measurements, in whole inches?

Show All Work

Length _____21_____ inches

Width _____ inches

Height _____ inches