

## **1. Cats, Dogs, and Kids Everywhere You Look**

**When our family gets together for Thanksgiving dinner at Grandma's house, everyone brings their pets. Each of the children owns both a dog and a cat.**

The names of the children are Marty, Nikki, Oscar, and Patty. Each dog and cat is named after one of the children, but none of the pets are named after their owners.

Patty's dog and Oscar's cat are both namesakes of the owner of the cat named Oscar. The namesake of Nikki's cat is the owner of the cat whose namesake owns the dog Marty.

**Who owns the dog Patty?**

## **2. Who Brought the Candy Corn?**

Five children dressed in different costumes arrived for a Halloween party riding bicycles. The brightly colored bikes stand in a row. Each child brought a different type of candy and their favorite drink to the party.

1. Emily rode the red bike,
2. Aaron brought M & M candies,
3. A bottle of Coke arrived on the green bike,
4. Brit drinks Pepsi,
5. The green bike is directly to the right of the white bike,
6. The witch brought Snickers,
7. Of course Big Bird rode in on the yellow bike,
8. The person on the middle bike drinks apple cider,
9. Carla rode the first bike,
10. The person dressed as a clown parked next to the person who brought the peanut butter cups,
11. The person dressed as Count Dracula drinks tomato juice,
12. The Big Bird parked next to the person who brought jelly beans,
13. Daniel dressed like a cowboy, and
14. Carla parked next to the blue bike.

There are three questions you must answer:

**Who drinks Root Beer?**

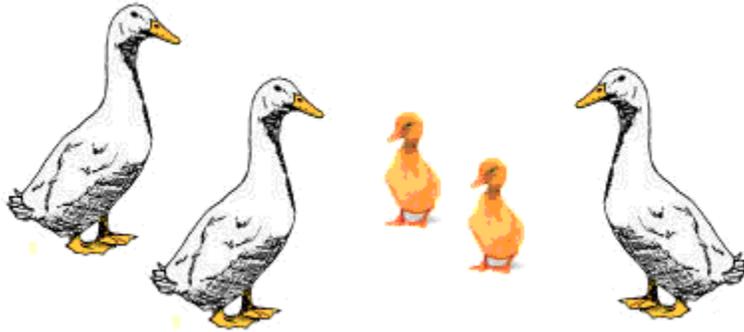
**Who brought the candy corn?**

**How did you figure this out?**

Name: \_\_\_\_\_

Algebra-Logic

### 3. Ducky Promenade



Three big ducks went out one day  
With two ducklings behind.  
Fourteen kilograms was their weight  
When all five were combined.

Add one duck and one duckling  
And their weight increased.  
Nineteen kilograms was the total  
Of the seven with webbed feet.

If all ducklings have one weight,  
and ducks all have another,  
Then you should find the total weight  
of three - one child, two mothers.

### 4. What Day Is It Today?

Sophie tells the truth only on Monday, Tuesday, Wednesday, and Thursday. She lies on all other days. Her sister Mary tells the truth only on Monday, Friday, Saturday and Sunday. She lies on other days. If they both said to their mom, "*Yesterday I lied,*" what day is it today?

Use Section 7-2 in your books to fill in or answer the following :

1. The letters most often used in logic are \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.
2. A sentence that has a \_\_\_\_\_ is called a statement. Every statement is either \_\_\_\_\_ or \_\_\_\_\_.
3. The \_\_\_\_\_ of a statement is usually formed by adding the word \_\_\_\_\_ to a given statement. How would I write the negations of the following statements:
  - a) The school has a gymnasium.
  - b) Georgia is not a city.
4. The notation \_\_\_\_\_ would be read “not p.”
5. A statement and its negation have \_\_\_\_\_ truth values.

**On page 192-193 complete problems #3-30(x3)**