Algebra 1
Application WS #1

Write and solve the equation for each of the problems.

1. The difference of one-third of a number and 8 is 1. What is the number?

2. One more than sixteen times a number is 81. What is the number?

3. One seventeenth of a number subtracted by 17 is 42. What is the number?

4. Maggie's brother is three years younger than twice her age. If the sum of their ages is 24, how old is Maggie? How old is her brother?

5. Stephen belongs to a movie club where he pays an annual fee of $39.95 and then rents DVDs for $0.99 each. In one year, Stephen spent $55.79. How many DVDs did he rent last year?

6. Kate is saving to buy a stereo system that costs $350. So far, she has saved $180 and adds $17 to her savings each week. How many more weeks must she save to be able to buy the stereo?

7. Three times the population density of Missouri minus 26 equals the population density of California, which is 217. What is the population density of Missouri?

8. The sum of two angles is 128˚. Angle A is 3 times the measure of angle B. Angle B is the sum of a number and 2. What are the measures of the 2 angles?

9. For her cell phone plan, Vera pays $32 a month and $0.75 for each minute over what the plan allows. If she paid $47 for her cell phone bill last month, how many minutes did she go over her plan?

10. Tina sold cookies at her club's bake sale. She spent $18.50 on supplies and charged $0.75 per cookie. If she made a profit of $24.25, how many cookies did she sell?