Problem 1: Prove by induction. 1^3 + 2^3 + ...+ n^3 = [n(n+1)/2]^2

Problem 2: What is the sum? 7 + 12 + 17 + ...+ 1087. You  must use correct formula.

Problem 3: What is the sum? 1 + 1/3 + 1/9 + 1/27 + ... You  must use correct formula.

Problem 4: Simplify the expression x - 3y/8 + 5z/7 into a fraction. That is expression\_1/expression\_2 form.

Problem 5: What is log 3 to the base 9.