Classroom Examples for Intermediate Algebra #3

1) How much 32% acid solution needs to be mixed with 30 gallons of an 85% acid solution to get a 42% acid solution? 129
2) How much 68% acid solution needs to be mixed with some 12% acid solution to get 175 gallons of a 60% acid solution?   150
3) How much pure water needs to be mixed with 80 gallons of a 28% acid solution to get a 20% acid solution?   32
4) How much pure acid must be mixed with 60 gallons of a 36% acid solution to get an 80% acid solution?   132
5) How much chocolate that costs $9 per pound should you mix with 12 lbs. of raisins that costs $4.50 per pound to get a mixture worth $7.50 per pound?   24
6) A theater sold 235 tickets and its gross receipts for the night totaled $1,534. Adult tickets cost $9, senior tickets cost $7 and kid tickets cost $4. If twice as many senior tickets were sold than adult tickets, how many of each type were sold? 54,108,73
7) Stevi has $6.43 in pennies, nickels, and quarters. If she has 3 times as many quarters as nickels and 5 less pennies than she has nickels, how many of each type of coin does she have?   8 nickels, 24 quarters 3 pennies
8) If seven less than triple the sum of the first and third of three consecutive even integers is thirty-seven more than five times the middle integer, find the three integers.   42,44,46
9) If three less than double the sum of three consecutive odd integers is two hundred nineteen, find the three integers.   35,37,39
10) The sum of two numbers is 42. If five more than triple the smaller is nine less than twice the larger, find the two numbers.   14,28
11) The difference of two numbers is seven. If two less than the sum of the two numbers is one more than triple the smaller, find the two numbers.   11,4