## Mixture Problems

1. How much pure disinfectant must be added to 30 gallons of an $8 \%$ solution to increase its strength of $25 \%$ ?
2. The radiator of an automobile already contains 12 quarts of a $10 \%$ solution of alcohol. How much alcohol must be added to make a mixture of $20 \%$ alcohol?
3. A pharmacist has 4 quarts of a $15 \%$ solution of iodine. How much alcohol must he add to reduce it to a $10 \%$ solution?
4. How much water must be added to 30 quarts of a $75 \%$ solution of acid to reduce it to a $15 \%$ solution?
5. A pocketbook contained 12 coins, all nickels and dimes. Their value was $\$ 1.05$. How many nickels were there?
6. Eleven coins consisting of quarters and nickels are worth $\$ 1.95$. How many quarters are there?
7. A grocer wishes to mix $\$ 120$ tea with $\$ 1.50$ tea to make a mixture of 60 pounds worth $\$ 1.30$ a pound. How many pounds of each kind must he mix?
