**Mixture Problems**

1.  Mrs. Boyd has a desk full of quarters and nickels. If she has a total of 25 coins with a total face value of $ 2.25, how many of the coins are nickels?



2.  Andy has 24 coins made up of quarters and half dollars, and their total value is $ 10.75. How many quarters does he have?



3.  A sum of money amounting to $ 5.65 consists of dimes and quarters. If there are 28 coins in all, how many are quarters?



4.  A woman made a deposit of $ 240. If her deposit consisted of 96 bills, some of them one -dollar bills and the rest being five -dollar bills, how many one -dollar bills did she deposit?



5.  A woman made a deposit of $ 298. If her deposit consisted of 98 bills, some of them one -dollar bills and the rest being five -dollar bills, how many one -dollar bills did she deposit?



6.  A woman made a deposit of $ 339. If her deposit consisted of 99 bills, some of them one -dollar bills and the rest being five -dollar bills, how many one -dollar bills did she deposit?



7.  Ron and Kathy are ticket-sellers at their class play, Ron handling student tickets that sell for $ 3.00 each and Kathy selling adult tickets for $ 6.50 each. If their total income for 27 tickets was $ 105.50, how many did Ron sell?



8.  Ron and Kathy are ticket-sellers at their class play, Ron handling student tickets that sell for $ 3.00 each and Kathy selling adult tickets for $ 5.50 each. If their total income for 24 tickets was $ 99.50, how many did Ron sell?



9.  Walt made an extra $7000 last year from a part-time job. He invested part of the money at 7% and the rest at 8 %. He made a total of $ 530 in interest. How much was invested at 8%?



10.  Walt made an extra $8000 last year from a part-time job. He invested part of the money at 10 % and the rest at 7%. He made a total of $ 710 in interest. How much was invested at 7%?



11.  Tim and Judy mix two kinds of feed for pedigreed dogs. They wish to make 29 pounds of feed worth $0.39 per pound by mixing one kind worth $0.25 per pound with another kind worth $0.49 per pound. How many pounds of the cheaper kind should they use?



12.  Tim and Judy mix two kinds of feed for pedigreed dogs. They wish to make 21 pounds of feed worth $0.60 per pound by mixing one kind worth $0.48 per pound with another worth $0.64 per pound. How many pounds of the cheaper kind should they use in the mix?



13.  Ellen wishes to mix candy worth $1.10 per pound with candy worth $2.57 per pound to form 28 pounds of a mixture worth $ 2.04 per pound. How many pounds of the more expensive candy should she use?



14.  Ellen wishes to mix candy worth $2.43 per pound with candy worth $3.92 per pound to form 32 pounds of a mixture worth $ 2.99 per pound. How many pounds of the more expensive candy should she use?



15.  A merchant has coffee worth $ 40 a pound that she wishes to mix with 40 pounds of coffee worth $90 a pound to get a mixture that can be sold for $50 a pound. How many pounds of the $ 40 coffee should be used?



16.  A merchant has coffee worth $ 20 a pound that she wishes to mix with 50 pounds of coffee worth $50 a pound to get a mixture that can be sold for $30 a pound. How many pounds of the $ 20 coffee should be used?



17.  A contractor mixes concrete from bags of pre-mix for small jobs. How many bags with 7% cement should he mix with 12 bags of 14.5 % cement to produce a mix containing 12% cement?



18.  A contractor mixes concrete from bags of pre-mix for small jobs. How many bags with 3 % cement should he mix with 12 bags of 15 % cement to produce a mix containing 11% cement?



19.  Anne and Nancy use a metal alloy that is 21.2% copper to make jewelry. How many ounces of a 20 % alloy must be mixed with a 26 % alloy to form 100 ounces of the desired alloy?



20)  Anne and Nancy use a metal alloy that is 17.8 % copper to make jewelry. How many ounces of a 13 % alloy must be mixed with a 29 % alloy to form 90 ounces of the desired alloy?



21.  How many liters of a 30 % alcohol solution must be mixed with 90 liters of a 60 % solution to get a 40 % solution?



22.  How many liters of a 30 % alcohol solution must be mixed with 60 liters of an 80 % solution to get a 50 % solution?



23.  In a chemistry class, 9 liters of a 4% silver iodide solution must be mixed with a 10% solution to get a 6% solution. How many liters of the 10% solution are needed?



24.  In a chemistry class, 3 liters of a 4% silver iodide solution must be mixed with a 10% solution to get a 6% solution. How many liters of the 10% solution are needed?



Answer Key

1) 20 nickels  2) 5 quarters

3) 19 quarters  4) 60 one-dollars

5) 48 one-dollars 6) 39 one-dollars

7) 20 tickets 8) 13 tickets

9) $4000 10) $3000

11) 12 pounds 12) 5 pounds

13) 18 pounds 14) 12 pounds

15) 160 lb. 16) 100 lb.

17) 6 bags 18) 6 bags

19) 80 ounces 20) 63 ounces

21) 180 L 22) 90 L

23) 4.5 L 24) 1.5 L