

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?

	Type I	Type II	Total
Mixture			
Quantity			
Amount			

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?

	Type I	Type II	Total
Mixture			
Quantity			
Amount			

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?

	Type I	Type II	Total
Mixture			
Quantity			
Amount			

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?

	Type I	Type II	Total
Mixture			
Quantity			
Amount			

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?

	Type I	Type II	Total
Mixture			
Quantity			
Amount			

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?

	Type I	Type II	Total
Mixture			
Quantity			
Amount			

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?

	Type I	Type II	Total
Mixture			
Quantity			
Amount			

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?

	Type I	Type II	Total
Mixture			
Quantity			
Amount			

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%?

	Type I	Type II	Total
Mixture			
Quantity			
Amount			

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%?

	Type I	Type II	Total
Mixture			
Quantity			
Amount			

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?

	Type I	Type II	Total
Mixture			
Quantity			
Amount			

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?

	Type I	Type II	Total
Mixture			
Quantity			
Amount			

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?

	Type I	Type II	Total
Mixture			
Quantity			
Amount			

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?

	Type I	Type II	Total
Mixture			
Quantity			
Amount			

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?

	Type I	Type II	Total
Mixture			
Quantity			
Amount			

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?

	Type I	Type II	Total
Mixture			
Quantity			
Amount			

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?

	Type I	Type II	Total
Mixture			
Quantity			
Amount			

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?

	Type I	Type II	Total
Mixture			
Quantity			
Amount			

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?

	Type I	Type II	Total
Mixture			
Quantity			
Amount			

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?

	Type I	Type II	Total
Mixture			
Quantity			
Amount			

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

	Type I	Type II	Total
Mixture			
Quantity			
Amount			

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

	Type I	Type II	Total
Mixture			
Quantity			
Amount			

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?

	Type I	Type II	Total
Mixture			
Quantity			
Amount			

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?

	Type I	Type II	Total
Mixture			
Quantity			
Amount			

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