

Worksheet #25 — Percentage Word Problems

E. White

- (1) Mary deposits some money in an account which pays 5% simple interest per year, and twice that amount in an account paying 4% simple interest per year. If she collects \$533.00 dollars in interest per year, how much did she deposit in each account?
- (2) Tawanda deposits some money in an account which pays 4% simple interest per year, and \$400 more than that in an account paying 5% simple interest per year. If she collects \$128.00 dollars in interest per year, how much did she deposit in the greater interest bearing account?
- (3) Travis invests 20% of his yearly income of \$30,000. He invests some in a $3\frac{1}{2}$ % account and the remainder at 4%. If he receives \$226 in interest, how much does he invest at each rate?
- (4) A total of \$8000 dollars is invested for one year, part at 9% and the remainder at 8%. If \$665 interest is earned, how much is invested at 8%?
- (5) A total of \$2000 was invested for one year, part at 8% and the remainder at 12%. If the total interest was \$184, how much was invested at 8%?
- (6) A total of \$1900 dollars is invested for one year, part at 4% and part at 6%. If \$90 interest is earned, how much is invested at 6%?
- (7) Fran deposited \$6000 in a savings account at 5%. Fran later deposited money in a Certificate of Deposit paying 8%. If Fran is now realizing 7% on his total investment, how much money did he invest at 8%?
- (8) Felicia's take home pay per week is \$456.34. Her deductions for social security, taxes, and insurance amount to 23% of her gross weekly pay. In addition, she has \$100 taken out of her weekly pay by the company for savings bonds. What is her weekly gross pay?
- (9) Jack invested some money at 4%, and twice that amount at 5%. If his total interest was \$400.00, how much money did he invest at 4%?
- (10) John invested \$2000 at a certain interest rate. He then invested \$3000 at twice the first rate of interest. If his total interest from both accounts was \$280, what were the interest rates?
- (11) Jose invested \$10,000 in two accounts. One account paid 2% more than the other account. He invested the same amount in both accounts. If he received \$800 dollars in interest, what percent interest did the lower paying account pay?
- (12) The population of a certain town increased 5% to a total of 2,541 in a certain year. What was the population the year before?
- (13) Maurice invests \$20,000 in two accounts. One pays 9% and the other pays 8%. If he receives \$440 more dollars in interest from the 9% account, how much did he invest in each rate?
- (14) John invests some money at 5%, he then invests \$2,000 more dollars at 6%, and he then invests \$1,000 less dollars at 8%. How much did he invest altogether, if his total interest from all the accounts was \$306.
- (15) How many liters of a 70% solution of acid must be mixed with 8 liters of a 40% acid solution to get a mixture which is 50% acid
- (16) How much water must be added to 3 gallons of a 4% saline solution to get a 3% saline solution.
- (17) How many liters of a 10% insecticide solution must be mixed with 40 liters of a 50% solution to get a 40% solution?
- (18) How many ounces of 5% hydrochloric acid and of 20% hydrochloric acid must be combined to get 10 ounces of a 12.5% solution.

- (19) A car radiator holds 18 liters of fluid. How much pure antifreeze must be added to a mixture that is 4% antifreeze in order to fill the radiator with a mixture that is 20% antifreeze.
- (20) A popular fruit drink is made by mixing fruit juices. A 50% juice is to be mixed with a 30% juice to get 200 liters of a 45% juice mixture. How many liters of each must be used?
- (21) How many liters each of 15% acid and 33% acid should be mixed to get 40 liters of 21% acid?
- (22) A radiator has 20 liters of a 20% antifreeze solution. How many liters of the radiator must be drained and replaced with pure antifreeze to obtain the correct 40% antifreeze solution?

Answers: (1) \$4100, \$8200 (2) \$1600 (3) \$2,800 at $3\frac{1}{2}\%$, \$3,200 at 4% (4) \$5500 (5) \$1400
(6) \$700 (7) \$12,000 (8) \$722.52 (9) \$2857.14 (10) $3\frac{1}{2}\%$, 7% (11) 7% (12) 2,420
(13) \$12,000 at 9%; \$8,000 at 8% (14) \$14,000 (15) 4 (16) 1 (17) $13\frac{1}{3}$ (18) 5 ounces of each
(19) 3 (20) 150 liters of 50% juice, 50 liters of 30% juice (21) $26\frac{2}{3}$ liters of 15% acid, $13\frac{1}{3}$ liters of 33% solution
(22) 5