

Word Problems

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Solve using the five-step problem-solving process.

- 1) The second angle of a triangle is 3 times as large as the first. The third angle is 60° more than the first. Find the measure of the smallest angle. 1) _____
- 2) Two angles of a triangle are 40° and 30° . What is the measure of the third angle? 2) _____
- 3) The complement of an angle measures 78° less than the angle. Find the measure of the angle. 3) _____
- 4) The supplement of an angle measures 28° more than twice its complement. Find the measure of the angle. 4) _____
- 5) Find the length of a rectangular lot with a perimeter of 70 meters if the length is 7 meters more than the width. ($P = 2L + 2W$) 5) _____
- 6) A square plywood platform has a perimeter which is 6 times the length of a side, decreased by 10. Find the length of a side. 6) _____
- 7) A rectangular Persian carpet has a perimeter of 160 inches. The length of the carpet is 18 inches more than the width. What are the dimensions of the carpet? 7) _____
- 8) A triangular lake-front lot has a perimeter of 2200 feet. One side is 300 feet longer than the shortest side, while the third side is 400 feet longer than the shortest side. Find the lengths of all three sides. 8) _____
- 9) The second angle of a triangle is 3 times as large as the first. The third angle is 25° more than the first. Find the measure of the smallest angle. 9) _____
- 10) Two angles of a triangle are 20° and 50° . What is the measure of the third angle? 10) _____
- 11) The complement of an angle measures 24° less than the angle. Find the measure of the angle. 11) _____
- 12) The supplement of an angle measures 35° more than twice its complement. Find the measure of the angle. 12) _____
- 13) Find the length of a rectangular lot with a perimeter of 116 meters if the length is 4 meters more than the width. ($P = 2L + 2W$) 13) _____
- 14) A square plywood platform has a perimeter which is 11 times the length of a side, decreased by 21. Find the length of a side. 14) _____
- 15) A rectangular Persian carpet has a perimeter of 192 inches. The length of the carpet is 18 inches more than the width. What are the dimensions of the carpet? 15) _____

- 16) A triangular lake-front lot has a perimeter of 1000 feet. One side is 300 feet longer than the shortest side, while the third side is 400 feet longer than the shortest side. Find the lengths of all three sides. 16) _____

Solve the problem.

- 17) Ron and Kathy are ticket-sellers at their class play, Ron handling student tickets that sell for \$2.00 each and Kathy selling adult tickets for \$4.50 each. If their total income for 364 tickets was \$1175.50, how many did Ron sell? 17) _____
- 18) Don runs a charity fruit sale, selling boxes of oranges for \$11 and boxes of grapefruit for \$10. If he sold a total of 762 boxes and his total income was \$8125, how many boxes of oranges did he sell? 18) _____
- 19) There were 33,000 people at a ball game in Los Angeles. The day's receipts were \$256,000. How many people paid \$12.00 for reserved seats and how many paid \$5.00 for general admission? 19) _____
- 20) There were 660 people at a play. The admission price was \$3.00 for adults and \$1.00 for children. The admission receipts were \$1360. How many adults and children attended? 20) _____
- 21) Mrs. Boyd has a desk full of quarters and nickels. If she has a total of 31 coins with a total face value of \$3.95, how many of the coins are nickels? 21) _____
- 22) Andy has 16 coins made up of quarters and half dollars, and their total value is \$7.00. How many quarters does he have? 22) _____
- 23) A sum of money amounting to \$4.45 consists of dimes and quarters. If there are 22 coins in all, how many are quarters? 23) _____
- 24) A woman made a deposit of \$181. If her deposit consisted of 69 bills, some of them one-dollar bills and the rest being five-dollar bills, how many one-dollar bills did she deposit? 24) _____
- 25) A paper boy collected \$6.55, part in nickels and part in dimes. If the number of nickels was 6 more than one-half the number of dimes, how many nickels were there? 25) _____
- 26) Joe has a collection of nickels and dimes that is worth \$4.70. If the number of dimes were doubled and the number of nickels were increased by 7, the value of the coins would be \$7.85. How many dimes does he have? 26) _____
- 27) A child's coin bank contains \$2.19 in pennies and nickels. If the number of pennies is 37 less than 3 times the number of nickels, how many pennies are in the bank? 27) _____
- 28) Mardi received an inheritance of \$60,000. She invested part at 10% and deposited the remainder in tax-free bonds at 8%. Her total annual income from the investments was \$5400. Find the amount invested at 10%. 28) _____

- 29) Walt made an extra \$7000 last year from a part-time job. He invested part of the money at 9% and the rest at 8%. He made a total of \$600 in interest. How much was invested at 8%? 29) _____
- 30) Roberto invested some money at 8%, and then invested \$5000 more than twice this amount at 11%. His total annual income from the two investments was \$5050. How much was invested at 11%? 30) _____
- 31) Tim and Judy mix two kinds of feed for pedigreed dogs. They wish to make 15 pounds of feed worth 0.69 per pound by mixing one kind worth \$0.39 per pound with another worth \$0.89 per pound. How many pounds of the cheaper kind should they use in the mix? Round your answer to the nearest pound, if necessary. 31) _____
- 32) Ellen wishes to mix candy worth \$1.66 per pound with candy worth \$6.34 per pound to form 26 pounds of a mixture worth \$2.74 per pound. How many pounds of the more expensive candy should she use? Round your answer to the nearest pound, if necessary. 32) _____
- 33) A contractor mixes concrete from bags of pre-mix for small jobs. How many bags with 7% cement should he mix with 4 bags of 19% cement to produce a mix containing 11% cement? 33) _____
- 34) Anne and Nancy use a metal alloy that is 13.7% copper to make jewelry. How many ounces of a 10% alloy must be mixed with a 18% alloy to form 80 ounces of the desired alloy? 34) _____
- 35) How many liters of a 50% alcohol solution must be mixed with 90 liters of a 70% solution to get a 60% solution? 35) _____
- 36) 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? 36) _____
- 37) In a chemistry class, 6 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? 37) _____
- 38) A merchant has coffee worth \$2 a pound that she wishes to mix with 9 pounds of coffee worth \$6 a pound to get a mixture that can be sold for \$3 a pound. How many pounds of the \$2 coffee should be used? 38) _____
- 39) An orchard operator must dilute 11 quarts of a 60% insecticide solution by adding water. How many quarts of water should be added to get a mixture that is 2% insecticide? 39) _____
- 40) In a chemistry class, 4 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? 40) _____

Answer Key

Testname: WORD PROBLEMS

- 1) 24°
- 2) 110°
- 3) 84°
- 4) 28°
- 5) 21 m
- 6) 5
- 7) 31 in., 49 in.
- 8) 500 ft, 800 ft, 900 ft
- 9) 31°
- 10) 110°
- 11) 57°
- 12) 35°
- 13) 31 m
- 14) 3
- 15) 39 in., 57 in.
- 16) 100 ft, 400 ft, 500 ft
- 17) 185 tickets
- 18) 505 boxes
- 19) 13,000 paid \$12 and 20,000 paid \$5
- 20) 350 adults and 310 children
- 21) 19 nickels
- 22) 4 quarters
- 23) 15 quarters
- 24) 41 one-dollar bills
- 25) 31 nickels
- 26) 28 dimes
- 27) 59 pennies
- 28) \$30,000
- 29) \$3000
- 30) \$35,000
- 31) 6 lb
- 32) 6 lb
- 33) 8 bags
- 34) 43 oz
- 35) 90 L
- 36) 1.5 L
- 37) 3.0 L
- 38) 27 lb
- 39) 319 qt
- 40) 2.0 L