

## MATH 521 WORD PROBLEMS

1. A plane flies 720 miles with the wind in 8 hours and against the wind in 9 hours. What is the speed of the plane in still air?
2. To prepare for a party, people supplied burgers and subs. They paid \$3 for the burgers and \$4 for the subs. They ended up with 123 food items and paid a total of \$441. How many of each?
3. A man invests \$15000 in two accounts, one at 7% and the other at 8%. The interest earned from both accounts is the same. How much invested at each rate?
4. If a pile of 49 coins, all dimes and quarters, has a value of \$8.05, how many of each coin type?
5. John joins a golf club at a fixed rate plus a \$25 fee per round. Ralph joins another club for same fixed fee but at \$30 per round. If John spends \$2800 over the season and Ralph spends \$3200 for the same number of rounds, how many rounds did each play?
6. A man invests \$12,000 into two accounts, one at 7% and the other at 4%. If the total interest earned is \$750, how much was invested at each rate?
7. How many liters of 6% acid solution must be mixed with a 4% acid solution to make 20L of a 4.8% solution.
8. A boy and his mom have a total age of 60. Eight years ago, the mom was 10 times his age. How old are they now?
9. The sum of two numbers is 56. The larger exceeds twice the smaller by 2. What are the numbers?
10. A boy and his dad have their ages total 44 years. In five years time, the man will be twice as old as his son. How old are they each now?
11. The sum of the digits of a two digit number is 15. The unit's digit is  $\frac{2}{3}$  the tens digit. Find the number.
12. The sum of the digits of a two digit number is 12. If the digits are reversed the new number is 8 more than  $\frac{1}{3}$  the original number. Find the original number.
13. A play sold adult tickets for \$12 and student tickets for \$4. \$2700 was received for 275 sold tickets. How many of each were sold?
14. The sum of the digits of a two digit number is 10. With the digits reversed, the new number is 2 less than three times the original number. Find the original number.
15. A woman invests \$18000 into two accounts, one at 6% and the other at 5%. The 5% interest account earns  $\frac{2}{3}$  the interest earned by the 6% account. How much invested in each account?

