There are **29** questions. Place your answer in the appropriate blank on the answer sheet provided. Include units when applicable. If your answer has more than 3 decimal places round it to the nearest thousandths. Do not give answers as fractions.

1) A man has $18,000 to invest. He invests $6,875 at 7% for one year and he invests $3,525 at 3.5% for two years. How much does he have left to invest?

2) One day Sarah earned $36.75 tutoring mathematics and she earned $22.25 tutoring physics. After work she bought a cd for $9.62. How much did she earn that day?

3) If a car averages 65 mph for 3 hours and 30 mph for 20 minutes, how far will it have gone?

4) A woman can rent a car for $29.95 per day plus 29 cents per mile driven. If she keeps the car for one day, how many miles can she drive for a cost of $68.52?

5) The total monetary value of 83 nickels and quarters is $10.95. How many nickels are there?

6) A water tank is being filled by two hoses. Alone, one can fill it in 4 hours and 18 minutes and the other can fill it in 6 hours and 12 minutes. If they use both to fill the water tank, how many hours will it take?

7) A kid weighing 85 lbs. sits on one end of a 16-ft. teeterboard and another kid weighing 115 lbs. sits on the other. How far from the 85-lb. kid must the fulcrum be placed for the two to be balanced?

8) Find the longer side of a rectangle whose area is 218.75 square feet and whose width is 5 feet shorter than its length.

9) The hypotenuse of a right triangle is 75 feet long. If the longer side is 15 feet longer than the other side, what is the length of the shorter side?

10) If two angles are supplementary and one is 16 degrees larger than the other. What is the size of the shorter angle?

11) Tim and Kay can build a storage shed in 8 days. If Tim built it by himself it would take him 24 days. How long would it take Kay to build the storage shed if she worked alone?

12) A student scored 69, 82, 89, 78, and 76 on five exams. What is his average score?

13) A 102-foot rope is cut into four pieces. Each successive piece is three feet less than twice as long as the previous one. Find the length on the longest piece.

14)   A rectangular garden has a perimeter of 108 feet. Its length is 5 feet more than three times its width. What is the length of the garden?

15) Find the sum of the first ten prime numbers.

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16) Find the product of the first ten prime numbers.

17) If one of two supplementary angles is $\frac{\pi}{12}$ radians more than twice the other angle, what is the radian measure of the larger angle?

18) A vacation home is expected to appreciate about $2,500 a year. If the home will be worth $122,000 in two years, what will it be worth in twelve years?

19) Three consecutive odd integers have a sum of 507. What is the largest of these integers?

20) So far a student has scored a 77%, 85%, 91%, and 97% on his tests. There is one more test, and the student needs to average 90% to earn an A. What is the minimum score he must make on the last test to get an A? Each test is 100-points.

21) A woman has two types of solder. One is 75% silver and the other is 25% silver. How many ounces of the 75% silver solder must she mix with the 25% silver solder to yield 8 lbs. of solder containing 40% silver?

22) A seed company sells two types of grass seed. A 50-pound bag of fescue sells for $49.95 and a 50-bag of bluegrass sells for $89.95. How many bags of bluegrass were sold in a week if they sold a total of 23 bags of seed for $1,388.85?

23) Pure acid is to be added to 120 grams of a solution that is 55% acid to obtain a new solution that is 75% acid. How many grams of 75% acid solution are there?

24) The average salaries of Tom, Jay and Kay is $35,000 per year. If Tom earns $5,000 more than Kay, and Jay earns one half as much as Tom, how much does Kay earn?

25) One circle has a diameter that is three times the length of the diameter of a second circle. The area of the larger circle is how many times the area of the smaller circle?

26) An airplane leaves an airport at 9:00 a.m. traveling East at 440 mph. Another airplane leaves the same airport at 9:30 a.m. traveling East at 550 mph. At what time will the second airplane catch up to the first plane? (Assume they do not change time zones)

27) A rectangular field 1,320 ft. long and 660 ft. wide has a concrete walkway of uniform width on its border. If there are 13,909 square feet of concrete in the walkway, what is the width of the walkway?

28) Two thousand concert tickets were sold. Adult tickets cost $17.50 each and kid's tickets cost $6.00 each. A total of $26,225.50 was collected from ticket sales. How many adult tickets were sold?

29) A box contains nickels, dimes, and quarters. The face value of the coins is $7.70. There are three times the number of nickels as there are quarters and one-half as many dimes as nickels. How many quarters are in the box?

Thank you for competing.