

# MATH 0172 – APPLICATIONS

## Instructions: Solve

1. A coin collection consists of 12 coins with a total value of \$1.20. If the collection consists only of nickels, dimes, and quarters, and the number of dimes is two more than twice the number of nickels, how many of each type of coin are in the collection?
2. The sum of the second and third of three consecutive even integers is six more than twice the first integer. Find the three integers.
3. A collection of nickels, dimes, and quarters consists of 9 coins with a total value of \$1.20. If the number of dimes is equal to the number of nickels, find the number of each type of coin.
4. After a huge markup of 70%, a certain, annoying furniture salesman in Houston (who will remain nameless) sold a big screen TV for \$4800. Find the original price before the markup.
5. How many gallons of 20% alcohol solution and 50% alcohol solution must be mixed to get 9 gallons of 30% alcohol solution?
6. A mixture of 16% disinfectant solution is to be made from 20% and 14% disinfectant solutions. How much of each solution should be used if 15 gallons of the 16% solution are needed?
7. It takes a boat 2 hours to travel 24 miles downstream and 3 hours to travel 18 miles upstream. What is the speed of the boat in still water? What is the speed of the current in the river?
8. An airplane flying with the wind can cover a certain distance in 2 hours. The return trip against the wind takes 2 hours and 30 minutes. How fast is the plane and what is the speed of the air, if the distance is 600 miles?

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1. 3 nickels, 5 dimes, and 1 quarter	2. 2, 4, 6	3. 3 nickels, 3 dimes, 3 quarters
4. \$2823.53	5. 6 gal of 20% and 3 gal of 50%	6. 10 gal 14% and 5 gal 20%
7. Boat Avg. 9 mph and current 3 mph	8. Plane= 270 mph Air 30 mph	9.
10.	11.	12.
13.	14.	15.

