CptS 121 – Program Design and Development

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Quiz 3

1. (4 pts) How do we generally decide on functions that we need to design for our programs? Explain in your own words!

* When we solve a big problem, we analyze it and break the solution into some smaller steps needed. So we are determining subproblems that are necessary to solve the whole problem. So then we solve each subproblem once. We draw a structure chart to help connect the relationships between subproblems, then combine solutions to solve the overall problem.

1. (4 pts – 1 pt for return type, 3 pts for input parameters) Provide the prototype for a function called volume\_pyramid()that accepts three double precision input parameters, which represent the values of the length, width, and height of a pyramid. The function computes and returns the volume of the pyramid defined by length (l), width (w), and height (h).

double volume\_pyramid (double l, double w, double h);

1. (7 pts – 1 pt for the header, 1 pt for variable declaration(s), 3 pts for computation, 2 pts for return value) Provide the function definition for volume\_pyramid(). Also, be sure to provide the function header for volume\_pyramid(). Recall, v = (l x w x h) / 3.

double volume\_pyramid (double l, double w, double h) // function header

{ //function definition

double v = 0.0;

v = (l \* w \* h) / 3;

return v;

}