12. [8 points] “Timely Time” is a local company that builds and sells clocks and watches. Let $C(q)$ be the cost (in dollars) for Timely Time to produce $q$ wall clocks.

a. [2 points] Write an equation that expresses the statement

“The cost of producing $k$ clocks is $m$ dollars.”

Answer: ______________________________

b. [2 points] Write an equation that expresses the fact that doubling the quantity of clocks produced increases Timely Time’s production costs by 80%.

Answer: ______________________________

Let $w(d)$ be the number of watches that can be produced by Timely Time for a cost of $d$ dollars. Assume that $w$ is an invertible function.

c. [2 points] Express the total cost for Timely Time to produce 15 clocks and 7 watches in terms of $C$ and $w$.

Answer: ______________________________

d. [2 points] Suppose that $w(C(q)) > q$ for all values of $q$ in the domain of $w(C(q))$. Give a practical interpretation of the inequality $w(C(q)) > q$ in the context of this problem.