

7. [10 points] Rachel is Phoebe's secret snowflake this year, so she decided to make a guitar for her. Rachel needs to buy some wood and she has narrowed down her options to three: mahogany, walnut and cedar.

Let $M(v)$, $W(v)$ and $C(v)$ be the costs, in dollars, for buying v kg of the mahogany, walnut and cedar wood, respectively.

In addition, assume that the functions M , W and C are invertible.

- a. [3 points] Write a mathematical expression for the following:

The total cost, in **cents**, of buying 3 kg of cedar and 2.5 kg of walnut.

(Note: There are 100 cents in 1 dollar.)

- b. [7 points] Write a practical interpretation of the following:

i. [3 points] $C^{-1}(20)$

ii. [4 points] $W(6) = M(4)$.