

Homework #6 – Heating and Cooling Equipment and Air Distribution

Due: 9/13 [20 points]

Name: Solution

From HW #5

Cooling Load = 37,878 BTUH

Calculate the Tonnage of AC Required

$$\text{tonnage} = \frac{37,878 \text{ BTUH}}{12,000} = 3.2 \quad \underline{\underline{3.5 \text{ ton}}}$$

Heating Load = 74,544 BTUH (90% furnace efficiency loss)

Homeowner System Requirements

Central Heating and Air Conditioning

Home Location – Chico, CA

Equipment Selection



<https://www.ecomfort.com/>

- Using the Web site given above, select a central air conditioner that meets the homes cooling requirement.

Complete the table below:

Make	Goodman
Model	GSX140421
Tonnage	3.5
SEER	14
Refrigerant	410A
Price	\$1783.00

- Using the Web site given above, select a central gas heater that meets the homes heating requirement.

Complete the table below:

Make	Goodman
Model	GM9S92080BN (1200 max CFM)
BTU	80K
Fuel	Natural Gas
AFUE	92%
Price	\$1549.00