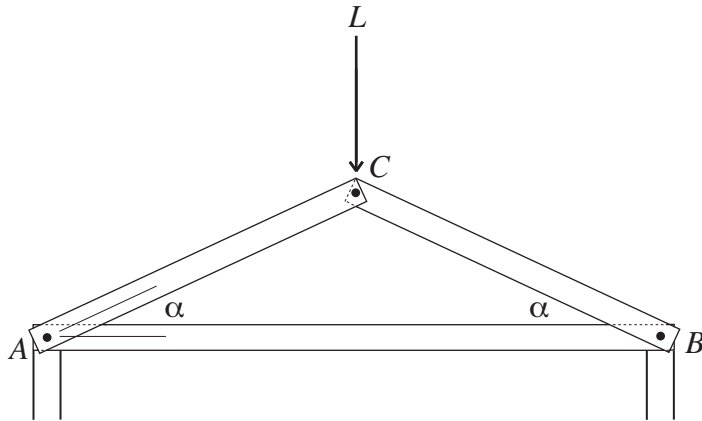


**Quiz 4. Math 10-270. February 15, 2012. Name**

*Much is asserted, both valid and not, about the issues below. If your answer involves assertions that are not in the text, please provide your sources.*

1. Describe in explicit terms the distinctive Islamic architectural features of the Islamic structures considered in the section “Splendors of Islam” in Chapter 3.

2. Consider the simple truss shown below. Assume that  $L = 10,000$  pounds and that  $\alpha = 25^\circ$ . Determine the force with which the tie beam pulls at the point  $A$ . In which direction is this pull?



3. Explain the structural scheme (recall that “structural” refers to the load bearing aspects) of a Gothic cathedral. Draw all the diagrams that are relevant to your explanation.