

Name:

Date:

Sculpture Design (Part Deux)

(ME03/SR05)

On-Demand (Check One)

Yes

No

An artist is creating a sculpture combining a cone and a rectangular prism. He has the following conditions in mind:

- The diameter of the base of the cone must have the same measure as the length and width of the rectangular prism.
 - The cone must be at least $3\frac{1}{2}$ feet tall and no more than 6 feet tall.
 - The height of the prism must be twice that of the cone.
 - The sculpture will use between 110 cubic feet and 130 cubic feet of stone.
1. What are dimensions of a cone and a rectangular prism that will meet the conditions for the sculpture? The formula for the volume, V , of a cone is $V = \frac{1}{3} Bh$ where B is the area of the base of the cone and h is the height of the cone.
