

GRADE 9-10 – CONTENT STANDARD #1, 3, 4, 5, 6, 9, 10
EXTENDED LESSON A

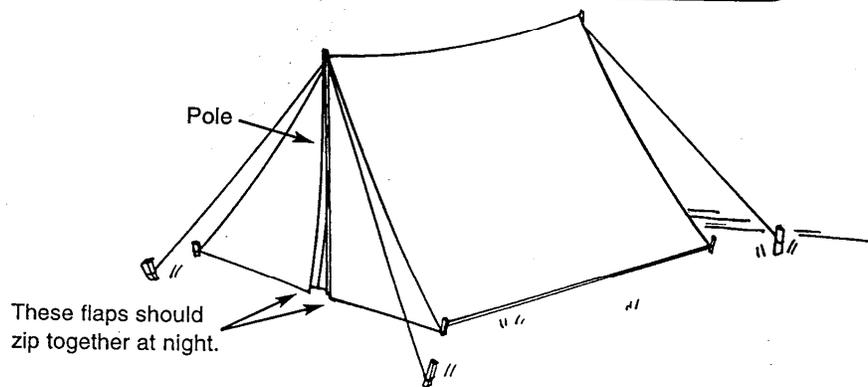
Name _____

Date _____

Designing a Tent

This problem gives you the chance to

- *estimate the dimensions of an adult*
- *visualize and sketch a net for a tent, showing all the measurements*



Your task is to design a tent like the one shown here.

Your design must satisfy these conditions:

- It must be big enough for two adults to sleep in (with their baggage).
 - It must be big enough for someone to move around in, while kneeling.
 - The bottom of the tent will be made from a thick rectangle of plastic.
 - The sloping sides and the two ends will be made from a single large sheet of canvas. (It should be possible to cut the canvas so that the two ends do not need to be sewn onto the sloping sides. It should be possible to zip up the two flaps at the end.)
 - Two vertical tent poles and tie lines will hold the whole tent up.
1. Estimate the relevant dimensions of a typical adult and write these down.
 2. Estimate the dimensions needed for the rectangular plastic base. Estimate the necessary length of the vertical tent poles. Explain how you got these measurements.
 3. Draw a sketch to show how you will cut the canvas from a single piece. Show all the measurements clearly. Calculate any lengths or angles you do not know. Explain how you figured out these lengths and angles.

High School Package 2



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