



Personal Tutors Chapter 6

Personal Tutor Activity 6.1 – Angle of Refraction

- 1. Apply** A light beam in air hits a sheet of ice at an angle of 25 degrees. Determine at what angle the light beam refracts. Discuss why this problem could be important to an engineer.
- 2. Starting Hint** Write out the equation first, and then write the numbers you know underneath each part.



Personal Tutors Chapter 6

Personal Tutor Activity 6.2 – Lateral Area of a Pyramid

- 1. Apply** An engineer must create a storage facility to cover a landfill area. He is trying to determine if he should use a pyramid or a cone. The constraints the engineer has provided include that the facility must not be higher than 100 feet tall. Further, the storage facility may not have a base area any larger than 400 square feet. An additional criterion is that the engineer should try to design a facility that will hold as much waste as possible, given the constraints. Determine if it would be better to build a pyramid or a cone. Give the dimensions of the facility you choose. Discuss your decision-making process.
- 2. Starting Hint** Write out the equation first, and then write the numbers you know underneath each part.