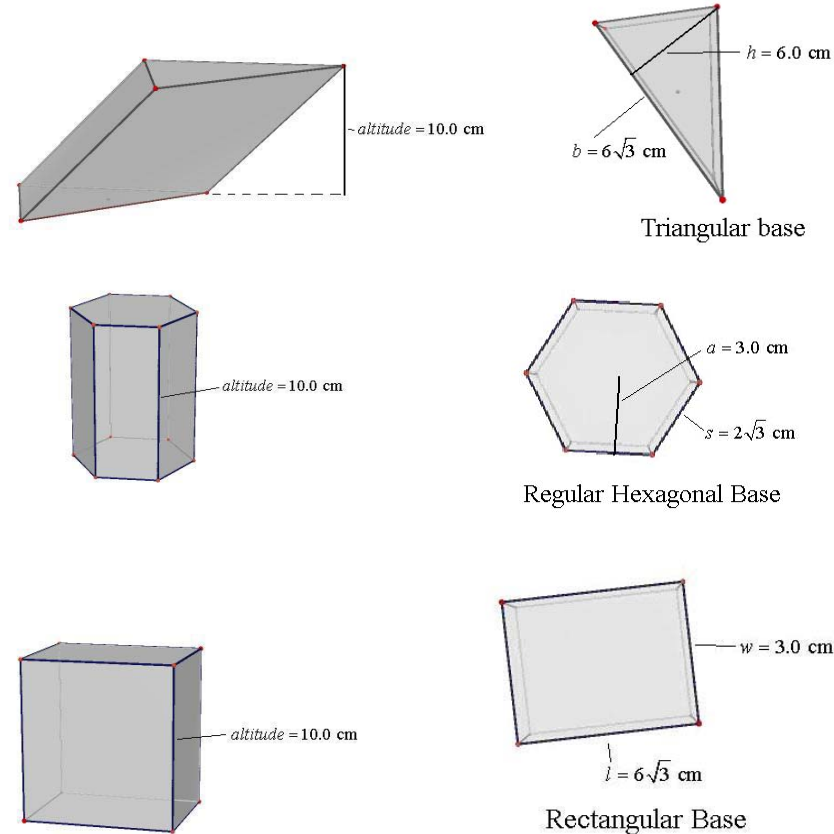


1. Examine the prisms below. Calculate the volume of each of the prisms. Observe your results and make a mathematical conjecture. Share your conjecture with several other students and formulate a conjecture that the entire group can agree on. Write a paragraph that proves your conjecture.



2. A rectangular gift box with whole number dimensions has a volume of 36 cubic inches. Find the dimensions of all possible boxes. Determine the box that would require the least amount of wrapping paper to cover the box. Find the dimensions of all possible boxes if the volume is 30 cubic inches. Determine the box that would require the least amount of wrapping paper to cover the box. Write a conjecture about the dimensions of a rectangular box with any fixed volume that would require the least amount of wrapping paper to cover the box. Write a mathematical argument for why your conjecture is true.