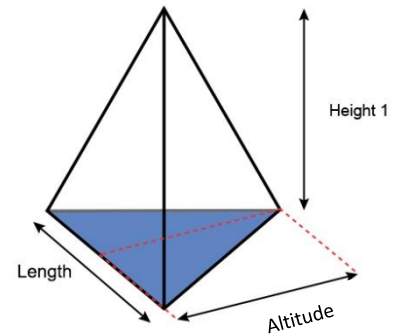


Solve the given problems and show your complete solution (3 points each).

1. When $x^4 + Rx^3 + Px^2 - 32x + 64$ is divided by $x - 1$, the remainder is 45. When divided by $x - 4$, the remainder is 0. Find R and P .

2. Find the height of a triangular-based pyramid, including the length and altitude of the base if the volume of the pyramid is 36 cubic feet and the length of the base is 3 less than twice the height and the altitude is 2 less than the height.



3. A ball was thrown upward with initial velocity of 20m/s from the ground. If the acceleration of gravity is 10m/s^2 ,
 - a. what is the maximum height?
 - b. after how many seconds will it reach the height of 15m?
4. A class trip with a fixed cost of \$6000 will be evenly divided to the number of attendees. If there had been 10 more attendees, the cost per attendee would be \$30 less. How many joined the trip?