

§ 5.8 Solving Three-Dimensional Problems by Using Trigonometry

Mr. Mick is on top of the school dropping watermelons, cantaloupes and pineapples. One of the students in the parking lot is looking at him with an angle of elevation of 54° such that they see each other and wave. The student turns his head 71° to the right to see a football player arriving 35 m away. All of a sudden, Mr. Mick tilts his body 32° to his left and throws a football horizontally to the football player while dropping a watermelon at the same time. Sadly the football player misses the ball and Mr. Mick looks at the football player with an angle of depression of 55° in despair. At what height was Mr. Mick throwing or dropping these items?

Bonus Question: What will land first; the horizontally thrown football or the dropped watermelon?