

Related Rate Worksheet 1

Problem. Water is being collected from a block of ice with a square base. The water is produced because the ice is melting in such a way that each edge of the base of the block is decreasing at 2 in/h while the height of the block is decreasing at 3 in/h. What is the rate of flow of water into the collecting pan when the base has edge length 20 in and the height of the block of 15 in? Make the simplifying assumption that water and ice have the same density.