

This quiz is worth 10 points, and you have 10 minutes to complete it. Show all work in detail, and circle your final answer.

Calculators ARE allowed today.

1. (10 pts) A large helium balloon is being inflated at the rate of 120 cubic inches per second. How fast is the radius of the balloon increasing at the instant that the balloon contains 300 cubic inches of air? (Note: The volume of a sphere of radius r is $\frac{4}{3}\pi r^3$.)