Name _____

MATH-1951
Quiz 6 - (3.9, 3.10)
Answer the following questions, and show your work. Answers need not be simplified.
   Scientific calculator only.

[1] (7 points total) A search light, which is on the ground, is tracking a man that is running on a straight path. If the man is running at a rate of 4 m/s and the light is located 10 m from the path, determine the speed at which the light is rotating when the man is 8 m from the point on the path closest to the light.

[2] (3 points total) Use linear approximation to approximate $\sqrt[3]{1.03}$.