Name_____ No Calculators. Present neatly. Score_____.

1.

The angle of elevation of the sun is decreasing at a rate of
0.25 rad/h. How fast is the shadow cast by a 400-ft-tall
building increasing when the angle of elevation of the sun
is $\pi/6$?

Your work:

Name_____ No Calculators. Present neatly. Score_____.

1.

A balloon is rising at a constant speed of 5 ft/s. A boy is cycling along a straight road at a speed of 15 ft/s. When he passes under the balloon, it is 45 ft above him. How fast is the distance between the boy and the balloon increasing 3 s later?

Your work: