Name_____ No Calculators. Present neatly. Score_____.

1.

Two sides of a triangle have lengths 12 m and 15 m. The
angle between them is increasing at a rate of 2°/min. How
fast is the length of the third side increasing when the angle
between the sides of fixed length is 60°?

2. Use Linear Approximation to estimate the quantity:

$\sqrt[3]{1001}$

Your work:

Name_____ No Calculators. Present neatly. Score_____.

1.

Two sides of a triangle are 4 m and 5 m in length and the angle between them is increasing at a rate of 0.06 rad/s. Find the rate at which the area of the triangle is increasing when the angle between the sides of fixed length is $\pi/3$.

2. Use Linear Approximation to estimate the quantity:

$\sqrt{99.8}$

Your work: