

(C2-9.3) Name:

## Homework Questions 2 – Solving Problems Using Turning Points

1. A typist's speed in words per minute over a four-minute interval, is given by the function

$$w = -6t^2 + 12t + 90 \quad \text{for } 0 < t < 4$$

Where  $t$  is the number of minutes from the beginning. What is the typists maximum speed?

2. A plank of wood has a length of  $4x$  cm and sides of  $x$  cm, and the ends of the wood are squares,.

a) What is the formula for the surface area of the plank of wood?

b) If the length of the wood is 10cm, what is the maximum surface area of the wood?