Another Rate of Change Worksheet $_{\rm Help\ me...}$

1. A rectangular water tank (see figure below) is being filled at the constant rate of 20 liters / second. The base of the tank has dimensions w=1 meter and L=2 meters. What is the rate of change of the height of water in the tank?(express the answer in cm / sec). HINT: 1 litre = 1000 cm^3

2. The area of a circular doggie puddle is growing at a rate of 12 $\,$ cm²/s. How fast is the radius growing at the instant when it equals 10 cm?