SHOW YOUR WORK

The minute hand on a clock is 2 inches long. It starts at the top of the clock and sweeps out an area as it goes around (see the picture).

1. (2 points) What is the angular speed of the minute hand?

2. (5 points) Give a formula that computes the area $A(t)$ swept out by the minute hand after $t$ minutes.

3. (3 points) How many minutes does it take for the minute hand to sweep out 8 in$^2$?