Warm-up: chips

Many industrial processes operate within some acceptability range. A computer processor manufacturer wants to make chips with mean $\mu = 3$ GHz. A mean too low or too high would be inefficient, as she would want to label them differently.

σ^2 unknown. $n = 144$ chips; sample mean 3.09 GHz, sample s.d. $s = 0.5$ GHz; $\alpha = 0.05$.

Should the manufacturer conclude that the machine is producing as desired?

On your own, or in pairs, 3 minutes:

- **Hypotheses:** state H_0 and H_1.
- **Test statistic:** compute it.
- **Decision:** do you reject H_0 at $\alpha = 0.05$?