Warm-up:

1. The statement represents the claim. Write the null and alternative hypotheses and state which one is the claim.

a. $\mu < 45$ b. $p = 0.54$ c. $\mu \geq 185$

2. Describe type I and type II errors for a hypothesis test of the following: An auto repair shop reports that the mean cost of repairing a sun roof in a vehicle is at least $2000.

3. Determine whether the hypothesis test is left-tailed, right-tailed, or two-tailed. Sketch a normal sampling distribution and shade the area for the P-value.

a. $H_0 : \mu \leq 24$
$H_a : \mu > 24$

b. $H_0 : \mu = 1024$
$H_a : \mu \neq 1024$

c. $H_0 : \mu \geq 4.5$
$H_a : \mu < 4.5$