3. Initialize specific and generic boundary

$$S_0: \{ \phi \; \phi \; \phi \}$$

$$G_0: \{ ? \; ? \; ? \}$$

for positive samples, move from specific to general
for negative samples, move from general to specific

Instance 1) +ve

$$S_1: \{ Small, Red, Circle \}$$

$$G_1: \{ ? \; ? \; ? \; ? \}$$

Instance 2) +ve

$$S_2: \{ ?, Red, Circle \}$$

$$G_2: \{ ? \; ? \; ? \}$$

Instance 3) -ve

$$S_3: \{ ?, Red, Circle \}$$

$$G_3: \{ large, ?, ? \} \quad \{ ?, ?, circle \}$$

↳ inconsistent to 1st Training example, Remove it

∴ $$S_3: \{ ?, Red, circle \}$$

$$G_3: \{ ? \; ? \; circle \}$$

4) -ve

$$S_4: \{ ?, Red, Circle \}$$

$$G_4: \{ Small, ?, Circle \}, \{ ?, Red, Circle \}$$

↳ inconsistent to 2nd T/E, Remove it

Version space.

S: $$\boxed{\{ ?, Red \; circle \}}$$

G: $$\boxed{\{ ?, Red, Circle \}}$$

∴ $$S_4: \{ ? \; Red, Circle \}$$

$$G_4: \{ ?, Red, Circle \}$$