



NAME

DATE

## SOLUTIONS

**PROBLEM: AP-2****GIVEN:**

A stone  $A$  is dropped from rest down a well, and in 1 s another stone  $B$  is dropped from rest. Determine the distance between the stones another second later.

**REQUIRED:**

$$d_{A-B} \text{ at } t=2 \text{ s}$$

**SOLUTION:**

$$s = s_0 + v_0 t + \frac{1}{2} a t^2 \quad (a = g = \text{constant})$$

$$s_A(t=2) = 0 + 0 + 64.4 \text{ FT}$$

$$s_B(t=1) = 0 + 0 + 16.1 \text{ FT}$$

$$d_{A-B} = 64.4 - 16.1 = 48.3 \text{ FT}$$

$$\boxed{d_{A-B} = 48.3 \text{ FT}}$$