

Name:

Number:

Date:

$$v = \frac{d}{t} \quad a = \frac{\Delta v}{t} \quad v_f = v_i + at \quad d = v_i t + \frac{1}{2}at^2 \quad v_f^2 = v_i^2 + 2ad$$

"Old Faithful" "The Big Chalupa" "Ain't Got no Time"

3. You stand at the top of a 30-meter cliff and shoot an arrow straight up into the air at an initial velocity of 12 m/s. You let it fall down to the bottom of the cliff

(a) How high above where you shot it will the arrow go?

(b) How fast will the arrow be travelling when it makes it to the bottom of the cliff?

4. A stone is hurled straight upward at a speed of 30 m/s from ground level.

(a) What is the total time of flight?

(b) What is the speed at the top of the flight?

(c) What is the acceleration at the top of the flight?