

## How to calculate g's in a crash

Given:

Delta V = 25 mph (36.65 ft/sec)

Time = 100 ms (crash pulse duration)

1) Calculate the acceleration

$$a = \frac{V}{T}$$

$$a = 366.50 \text{ ft/sec}^2$$

2) Calculate the deceleration

$$a = fg$$

$$f = (366.50 \text{ ft/sec}^2) / (32.2 \text{ ft/sec}^2)$$

$$f = 11.38 \text{ g's}$$

3) Calculate the amount of force experienced by the 200 lb driver

$$F = ma$$

$$F = [200 \text{ lbs} / (32.2 \text{ ft/sec}^2)] (366.5 \text{ ft/sec}^2)$$

$$F = 2276.3 \text{ lbs}$$