

dynamics explanation

## 1 question b

$$y(t) = y_0 + V_{y_0}t + 0.5at^2 \quad (1)$$

$$a = -g \quad (2)$$

$$V_{y_0} = 0 \quad (3)$$

$$y(t) = -0.5 \times 4 \times 6^2 \quad (4)$$

$y(t) = -72m$  (5) That means that the ball traveled 72m downwards which means that the height of the spaceship is 72m