

3. Free Fall.notebook

HW Answers: Acceleration

1) $a = 11.5 \text{ m/s}^2$

2) $a = 4.51 \text{ m/s}^2$

3) $a = -1.42 \text{ m/s}^2$

Do Now: Complete the following chart

$a = 3 \text{ m/s}^2$ $v_i = 5 \text{ m/s}$

$t = 1 \text{ s}$	$v =$
$t = 2 \text{ s}$	$v =$
$t = 3 \text{ s}$	$v =$
$t = 4 \text{ s}$	$v =$

Free Fall

Near the surface of the earth, ALL objects, **regardless of their mass**, accelerate downward at a rate of 9.81 m/s^2 . (we use 9.8 m/s^2).

Acceleration due to Gravity (Reference Table):

$g = 9.81 \text{ m/s}^2$ (We can use 9.8 m/s^2)

Free fall free-bees:

$a = 9.8 \text{ m/s}^2$ and $v_i = 0$

Words that mean free fall: Dropping, jumping off, pushing off

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Example:

Nicole accidentally drops her kitty cat and it hits the ground 3 seconds later.

What was Nicole's cat's speed right before hitting the ground?

