

## Elevator Ride Worksheet

Names:

Using the Free Fall of Fear Program and attached instructions

Tasks:

1. For the Easy Rider, what effect does changing the length of the ride (by changing  $t_{max}$ ) have on the rider's experience (in terms of g-forces).

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2. For the Easy Rider, what effect does changing the height of the ride (by changing  $h$  and shaping the ride profile accordingly) have on the rider's experience (in terms of g-forces).

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3. For more dramatic rides that stay within our ride requirements of starting and ending velocity, what is the greatest g-force you can get out of the simulation? Is this a safe ride? Include a sketch of your height versus time and g-force versus t graphs.

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4. What is the greatest time you can get the rider to be at or near zero g's? Include a sketch of your height versus time and g-force versus t graphs.

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5. Design your most thrilling, survivable ride. What about this ride makes it exciting? Will riders need special equipment (padding, restraints, g-suits, etc.)? Include a sketch of your height versus time and g-force versus  $t$  graphs.

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