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## Acceleration Due to Gravity

1. A rocket is fired up into the air with a vertical velocity of $80 \mathrm{~m} / \mathrm{s}$. What will its velocity be after 5 seconds?
2. A ball is dropped from a tall building. What will its velocity be after 2 seconds?
3. How fast is a rock thrown up into the air if it reaches its maximum height 5 seconds later?
4. A very dumb child shoots an arrow into the air at a velocity of $150 \mathrm{~m} / \mathrm{s}$ [up]. What will the velocity of the arrow be after 20 seconds?
5. A rock is thrown downwards from a tall building. 3 seconds later, its velocity is $63 \mathrm{~m} / \mathrm{s}$ [down]. What was the initial velocity of the rock?
