






Which statements are True and which statements are False?

WELL DONE!

-  **TRUE / FALSE** **A)** Acceleration is one kind of change in motion.
-  **TRUE / FALSE** **B)** If you are in a bus that suddenly accelerates, you can feel it.
-  **TRUE / FALSE** **C)** Forces push, but they do not pull.
-  **TRUE / FALSE** **D)** Only solid things have mass.
-  **TRUE / FALSE** **E)** Acceleration is the same thing as velocity.



In a foot race, runners run from the starting line to the finish line 328 feet (100 meters) away. When are the runners sure to be decelerating?

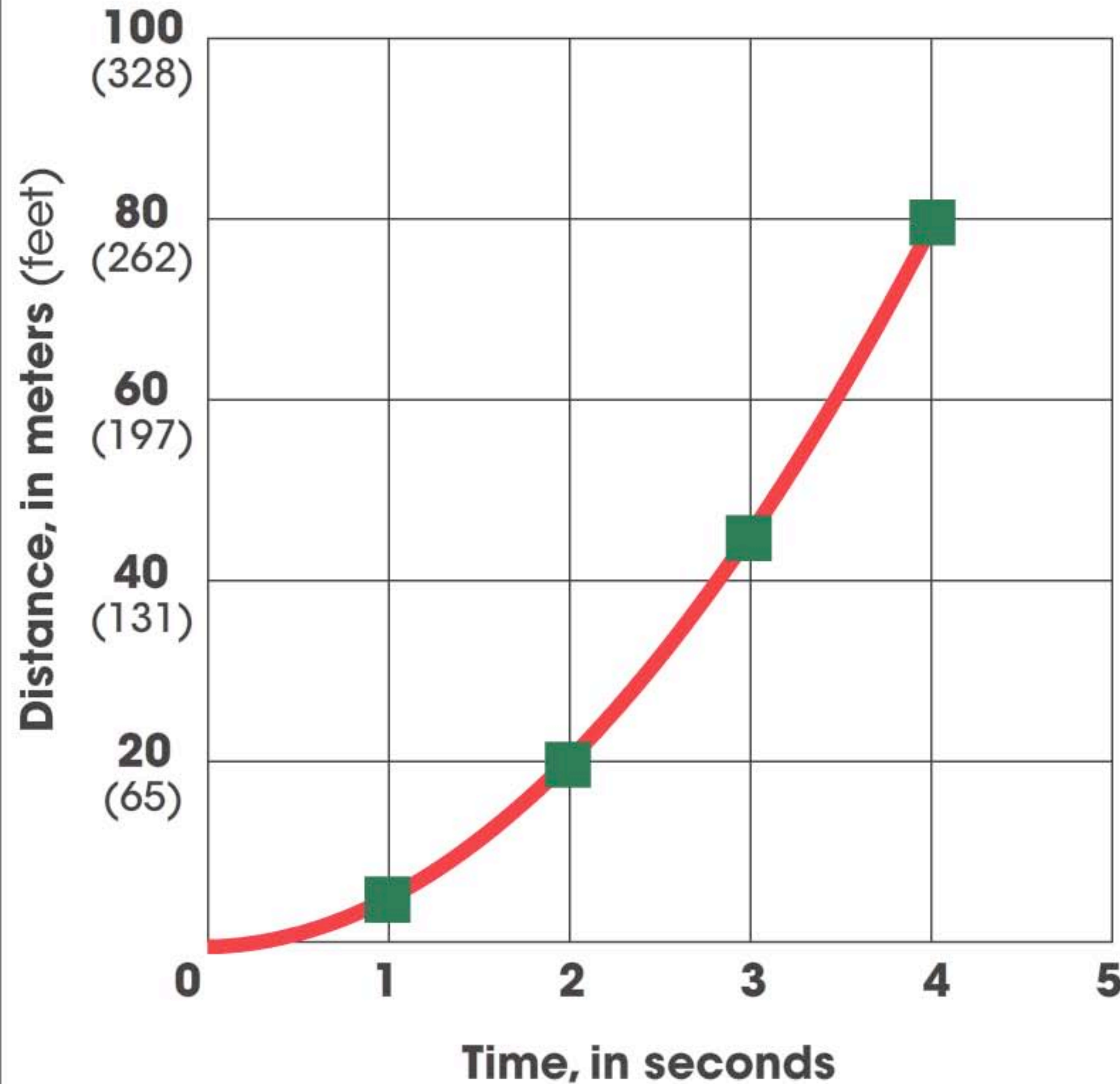
(press here for answer)





What makes things accelerate or decelerate? There is a law of motion that says, "Things don't change their motion unless they are acted on by a force." A force is a push or a pull. The accelerating car is acted on by the force of the wheels pushing on the highway. A falling rock is acted on by the force of **gravity**. Force is also needed to make something change the direction in which it is moving. The greater the force the more it will change the motion of something.

Acceleration of a Falling Apple Timeline

Acceleration = 10 meters (32 feet) per second *per second*

Distance = 0.5 X acceleration X time squared



Time, in seconds		Distance, in meters(feet)
1		5 (16)
2		20 (64)
3		45 (144)
4		80 (256)

WELL
DONE!



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