IGCSE Physics Year 10

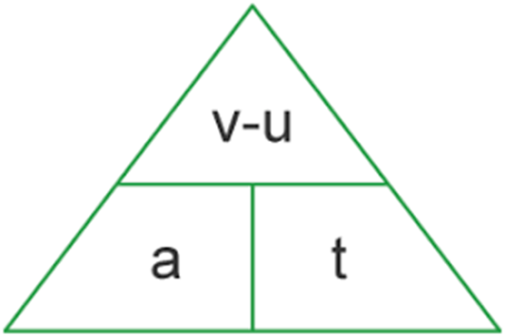
**Revision in Acceleration**

What is **acceleration**?

**Acceleration**, in physics, is the rate of change of velocity of an object with respect to time. An object's acceleration is the net result of any and all forces acting on the object, as described by Newton's Second Law.

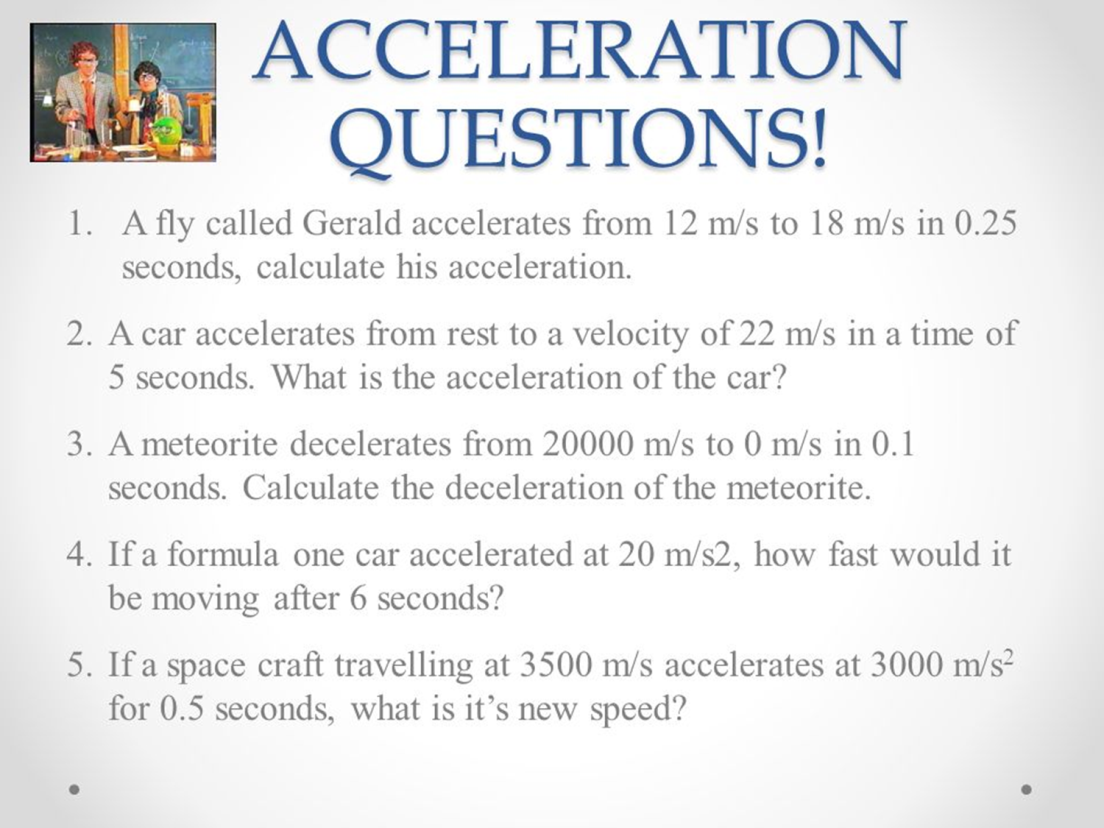
**How is it calculated?**

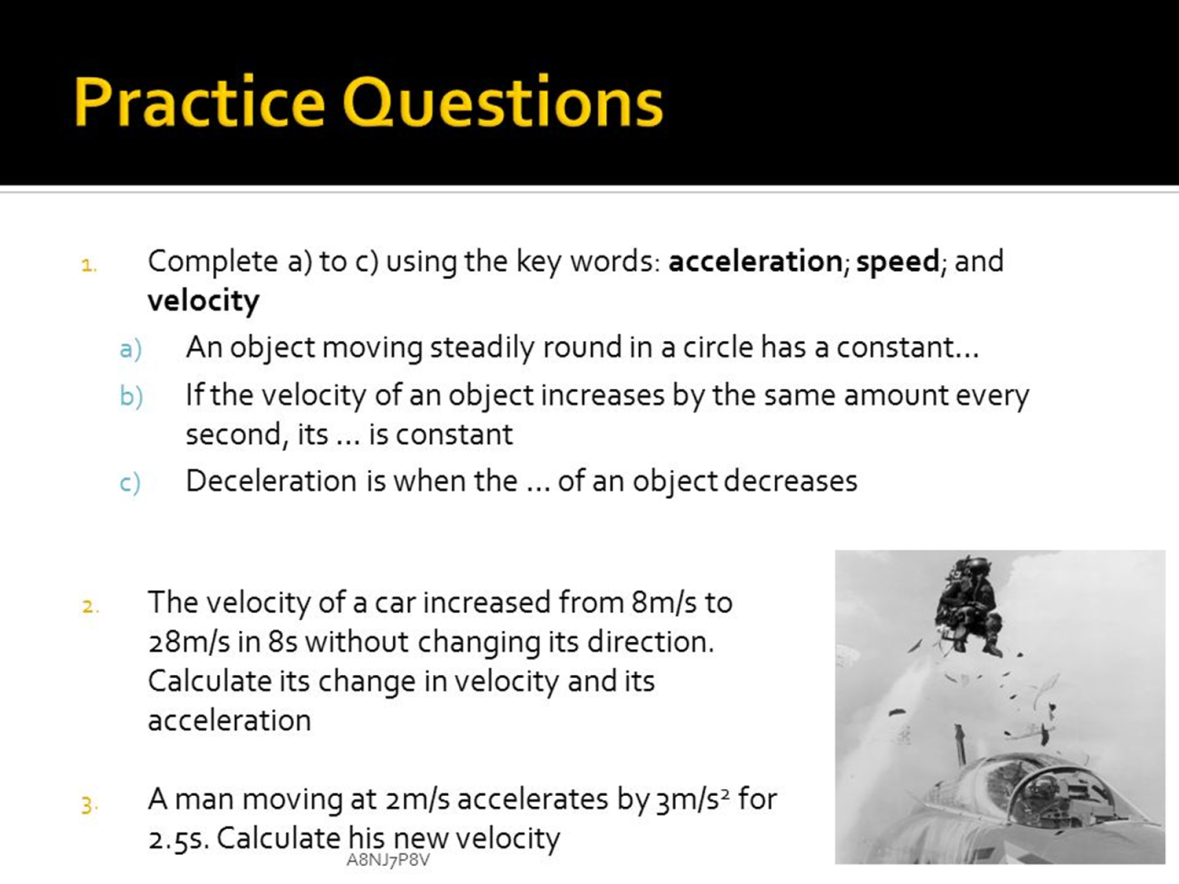
**Acceleration** is the rate at which an object changes its speed. It's calculated using the equation: **acceleration** = change in speed / time taken. Speed-time graphs illustrate how the speed of an object changes over time. The steeper the gradient of the line, the greater the **acceleration**.



What is **deceleration**?

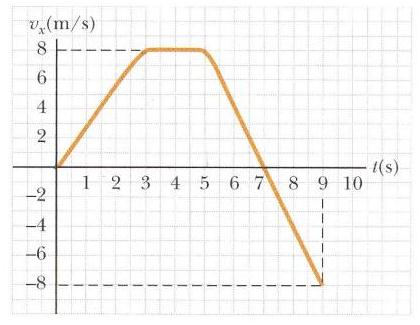
**Deceleration** is the opposite of acceleration. It is the rate at which an object slows down. Deceleration is the final velocity minus the initial velocity, with a **negative sign** in the result because the velocity is **dropping**.

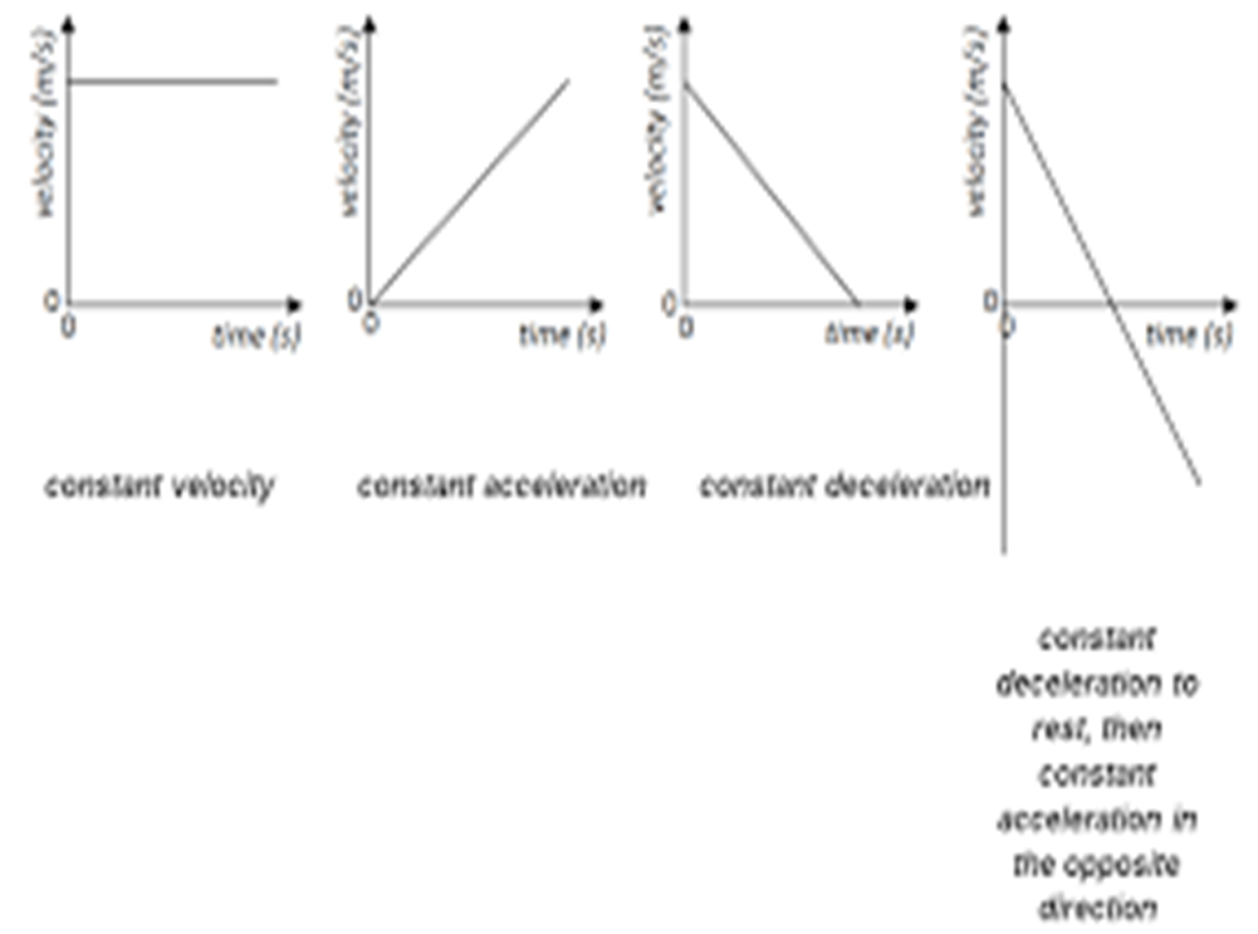




**velocity-time diagrams**

* The principle is that the **slope** of the line on a velocity-time graph reveals useful information about the acceleration of the object. If the acceleration is zero, then the slope is **zero** (i.e., a horizontal line)





**Determination of distance from the graph**

