



What equations do I need to know for the Edexcel IGCSE physics exam for the Astrophysics topics?

In the list below the equations are grouped into the ones that need learning for IGCSE Edexcel double award (4SD0) and Physics only specification (8463). The bold type equations are Paper 2 only. This topic does not require the memorization of any equations and all the equations will be given in the exam. These equations are at the end of the list. The equation list required for OCR, CIE, AQA trilogy are quite different for this topic.

Equations given in exam	
$\frac{\text{change in wavelength}}{\text{reference wavelength}} = \frac{\text{velocity of a galaxy}}{\text{speed of light}}$	$\frac{\lambda - \lambda_0}{\lambda_0} = \frac{\Delta\lambda}{\lambda_0} = \frac{v}{c}$
orbital speed = $\frac{2 \times \pi \times \text{orbital radius}}{\text{time period}}$	$v = \frac{2 \times \pi \times r}{T}$