Annotated Higher Relationships Sheet

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| ***NB time can be in other units as this is a ratio, but both times must be in the same unit.***  ***c = 3.0 × 108 ms-1*** |
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| **ADD when the object moves AWAY from the observer and**  **TAKE AWAY (subtract) when the object comes TOWARDS the observer** |
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| ***NB for this course the Hubble Constant Ho is given as 2·3 x 10-18 s-1*** |
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| ***NB the speed of light squared is equal to 9.0 × 1016  m2s-2*** |
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| **This is more easily understood as** |
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| *NB Planck’s constant = 6.63 x 10-34 Js* |
| *NB Planck’s constant = 6.63 x 10-34 Js*  *hfo is also known as the work function (J), hf is the energy of the incident photon (J)* |
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| **Slit separation (m) × sin of angle from centre to the spot = m no. of whole number of wavelengths (m)**  **NB This equation is for constructive interference** |
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| ***This formula really applies to material 1 being a vacuum, but there is not much difference between the refractive indexes of air and a vacuum ∴ we assume for Higher they have the same value.*** |
| **The critical angle is the angle in the material when the angle in air is 90°** |
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| **For resistors in series** |
| ***For resistors in parallel*** |
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| **For resistances in series (potential divider circuits)**  **Ratio of the voltages in series = ratio of the resistance in series** |
| **This can also be written as**  **I is the total current in the circuit, r is in series with the combined circuit resistance** |
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| **NB for the random uncertainty in a value the units of the random uncertainty are the same as for the quantity you are finding the uncertainty for.** |