

7. While math is not a large part of this class, it will be necessary for the final project where you tell me what to photograph with the telescope. In order for me to make sure everyone is at the same math level, please solve the following four problems (you can use a calculator).

$$N = \frac{D^2}{\sqrt{t}}$$

1A. If $D = 16$, $t = 15$, what is N ?

1B. If $D = 72$, what must t be in order for N to be the same as in **1A**?

$$m - M = 5 \log\left(\frac{D}{10}\right)$$

2A. If $m = 3$ and $D = 45$, what is M ?

2B. If $m = 3$ and $M = 12$, what is D ?

8. In a few paragraphs tell me a) why you want to go on this trip, b) what aspect(s) of this trip you find the most interesting to you, and c) what you hope to gain from this trip.