

$$V_+ = V_- = \frac{1}{n+1} e_1^2$$

$$m V_1 V_2 = \frac{1+m}{n+1} e_1^2 - e_2^2$$

$$V_1 V_2 = \frac{1+m}{m(n+1)} e_1^2 - \frac{1}{m} e_2^2$$

$$= \frac{1}{4} e_1^2 - \frac{1}{4} e_2^2$$

$$m=4 \rightarrow \frac{1+m}{m(n+1)} = \frac{1}{4} \rightarrow \frac{1+4}{\cancel{4(n+1)}} = \frac{1}{\cancel{4}}$$

$$n+1=5 \rightarrow n=4$$

