

$$\lim_{m \rightarrow \infty} \frac{m - \sqrt{m} \log m}{\log(m^2/2^m)} = \frac{\cancel{m-1}}{\cancel{2^m}} \cdot \frac{1}{\cancel{m^2/2^m}}$$

$$= \frac{1}{2} \cdot \frac{1}{m}$$

$$= \frac{1}{2m}$$

$$= \frac{1}{2} \cdot \frac{1}{2} = \frac{1}{4}$$

$$= \frac{1}{8}$$

$$= \frac{1}{8}$$