28. $\log [\log (\log x^5)]$

Sol. Let $\qquad y = \log [\log (\log x^5)]$

$$\therefore \qquad \frac{dy}{dx} = \frac{d}{dx}[\log(\log \log x^5)]$$

$$= \frac{1}{\log \log x^5} \cdot \frac{d}{dx}(\log \cdot \log x^5)$$

$$= \frac{1}{\log \log x^5} \cdot \frac{1}{\log x^5} \cdot \frac{d}{dx}\log x^5$$

$$= \frac{1}{\log \log x^5} \cdot \frac{1}{\log x^5} \cdot \frac{d}{dx}(5 \log x)$$

$$= \frac{5}{x \cdot \log(\log x^5) \cdot \log(x^5)}$$

Try to solve exemplar problems specifically from 25-43 for this video's concepts.