

$x > 0$      $\log_a^n b = \frac{1}{n} \log_a b$     4.118  
 3

$$\log_2 x \cdot \log_{\frac{1}{4}} x \cdot \log_{\frac{1}{8}} x \cdot \log_{16} x > \frac{2}{3}$$

$$\log_2 x \left(-\frac{1}{2} \log_2 x\right) \left(-\frac{1}{3} \log_2 x\right) \left(\frac{1}{4} \log_2 x\right) > \frac{2}{3}$$

$$\log_2^4 x > 16$$

$$\log_2 x > 2 \quad \rightarrow \quad \log_2 x < -2$$

$$x > 4 \quad \quad \quad x < \frac{1}{4}$$

$$\boxed{x > 4, \quad 0 < x < \frac{1}{4}} \quad : \text{p1b10d}$$