

3 แบบฝึกทักษะ

จงหาค่าของจำนวนต่อไปนี้

1. $\log_2 32 + \log_3 27 =$	2. $(\log_2 9)(\log_3 16) =$
3. $\log 25 + \log 2 - \log 5 =$	4. $\log 35 - \log \frac{7}{4} + \log 5 =$
5. $\log 27 + 3 \log \frac{15}{16} + 4 \log \frac{5}{4} - \log 80 =$	6. $(\log_5 625)(\log_7 343) + \log_3 9 - 2 \log_3 27 =$

$$\log_2 2^5 + \log_3 3^3$$

$$\left(\frac{\log 9}{\log 2}\right)\left(\frac{\log 16}{\log 3}\right)$$

$$\log\left(\frac{25 \times 2}{5}\right)$$

$$(\log_5 5^4)(\log_7 7^3) + (\log_3 3^2) - (2 \log_3 3^3)$$

$$\log\left(\frac{35}{7} \times 5\right) = \log\left(35 \times \frac{4}{7} \times 5\right)$$

$$\log\left[\frac{27 \times \left(\frac{15}{16}\right)^3 \times \left(\frac{5}{4}\right)^4}{80}\right]$$

$$8 \quad 8 \quad 8 \quad 1 \quad 2 \quad 6 \log_4 5$$

=

7. $\log_{\frac{1}{2}} 8 + \log_{\frac{1}{4}} 16 + \log_4 \left(\frac{1}{8} \right) + \log_{16} 8 =$	8. $\log_2 (\log_3 10^{12}) - \log_2 (\log_3 10^3) =$
9. $\log_3 (\log_2 (\log_2 (\log_2 256))) =$	10. $\frac{1}{\log_2 120} + \frac{1}{\log_3 120} + \frac{1}{\log_4 120} + \frac{1}{\log_5 120} =$
11. $(\log_3 9)(\log_4 16) - 2 \log_{10} 5 + 2 \log_{10} 20 =$	12. $(\log_2 8)(\log_3 81) + 4 \log_{10} 400 - \log_{10} 256 =$

$$(\log_3 3^2)(\log_4 4^2) - \log_{10} (5^2 \times 20^2)$$

$$\log_2 \left(\frac{\log_3 10^{12}}{\log_3 10^3} \right) = \log_2 \left(\frac{12 \log_3 10}{3 \log_3 10} \right) = \log_2 \left(\frac{12}{3} \right) = \log_2 4$$

$$\log_{2^{-1}} 2^3 + \log_{2^{-2}} 2^4 + \log_{2^2} 2^{-3} + \log_{2^3} 2^3 = \frac{3}{-1} + \frac{4}{-2} + \frac{-3}{2} + \frac{3}{4}$$

$$(3 \times 4) - \log_{10} \left(\frac{400^4}{256} \right)$$

$$\begin{aligned} & \log_3 (\log_2 (\log_2 (\log_2 2^8))) \\ &= \log_3 (\log_2 (\log_2 8)) \\ &= \log_3 (\log_2 2^3) \end{aligned}$$

$$\begin{aligned} & \frac{\log 2}{\log 120} + \frac{\log 3}{\log 120} + \frac{\log 4}{\log 120} + \frac{\log 5}{\log 120} \\ &= \log_{120} 2 + \log_{120} 3 + \log_{120} 4 + \log_{120} 5 \\ &= \log_{120} (2 \times 3 \times 4 \times 5) \end{aligned}$$

$$\frac{-23}{4} \quad 4 \quad 0 \quad 1 \quad 1 \quad 2$$

13. $\log 35 + \log 6 - \log 7 + \log 10 - \log 3 =$	14. $\log 20 + 3 \log \frac{80}{81} + 5 \log \frac{24}{25} + 7 \log \frac{15}{16} =$
15. $10^{\log_{10} 12 \dots \log_{10} 2}$	16. $2 \log 5 + 2 \log 20 =$
17. $2 \log 15 + 3 \log 4 - 4 \log 2 - 2 \log 3 =$	18. $\log (\sqrt{10} \div \sqrt[3]{10}) =$
19. $\frac{\log \sqrt{27} + \log \sqrt{8} - \log \sqrt{125}}{\log 6 - \log 5} =$	20. $\log_3 2 \log_4 3 \log_5 4 \dots \log_{100} 99 =$

$$\log (10^{\frac{1}{2}} \div 10^{\frac{1}{3}}) = \log (10^{\frac{1}{2} - \frac{1}{3}})$$

$$\log (5^2 \times 20^2)$$

$$10^{\log_{10} \frac{12}{2}}$$

$$\log \frac{35 \times 6 \times 10}{7 \times 3}$$

$$\frac{\log 2}{\log 3} \frac{\log 3}{\log 4} \frac{\log 4}{\log 5} \dots \frac{\log 99}{\log 100} = \frac{\log 2}{\log 100}$$

$$\log \left(\frac{15^2 \times 4^3}{2^4 \times 3^2} \right)$$

$$\frac{\log \frac{\sqrt{27} \times \sqrt{8}}{\sqrt{125}}}{\log \frac{6}{5}} = \frac{\log \frac{6}{5}}{\log \frac{6}{5}}$$

$$\log \left[20 \times \left(\frac{80}{81} \right)^3 \times \left(\frac{24}{25} \right)^5 \times \left(\frac{15}{16} \right)^7 \right]$$

$$-\frac{1}{6}$$

$$\frac{1}{2} \log 2$$

$$1$$

$$2$$

$$1$$

$$2$$

$$4$$

$$6$$