

 <p>Universiti Malaysia PAHANG <small>Engineering • Technology • Creativity</small></p> <p>FACULTY OF INDUSTRIAL SCIENCES & TECHNOLOGY</p>	SUBJECT: MATHEMATICS FOR MANAGEMENT		MARKS: /10
	CODE: BUM1123	TOPIC: EXPONENTIAL & LOGARITHMIC FUNCTIONS	
	ASSESSMENT: QUIZ	NO: 4	DUE/DURATION: 10 MINUTES
NAME:			

1. Solve $3 \log 5 + \log(x+3) = 3$ **(3 Marks)**

2. Solve $\log_3 x + \log_4 x + \log_{16} x = 14$ **(4 Marks)**

3. Solve $\left(\frac{25}{100}\right)^x = 4^{3x-4}$ **(3 Marks)**



No	Answer	Marks
1	$3 \log 5 + \log(x+3) = 3$ $\log 5^3 + \log(x+3) = 3$ $125(x+3) = 10^3$ $125(x) + 375 = 1000$ $x = 5$	M1 M1 A1
		3 Marks
2	$\log_3 x + \log_4 x + \log_{16} x = 14$ $\log_3 x + \frac{\log_3 x}{\log_3 4} + \frac{\log_3 x}{\log_3 16} = 14$ $\log_3 x + \frac{\log_3 x}{2} + \frac{\log_3 x}{4} = 14$ $4 \log_3 x + 2 \log_3 x + \log_3 x = 56$ $7 \log_3 x = 56$ $\log_3 x = 8$ $\log x = 3^8$ $\log x = 6561$	M1M1 M1 A1
		4 Marks
3	$\left(\frac{25}{100}\right)^x = 4^{3x-4}$ $\left(\frac{1}{4}\right)^x = 4^{3x-4}$ $4^{-x} = 4^{3x-4}$ $-x = 3x - 4$ $4x = 4$ $x = 1$	M1 M1 A1
		3 Marks

