

數學 2 期末考練習

一、計算下列指數與對數

$7^0 =$ $7^1 =$ $7^2 =$ $(-7)^1 =$ $(-7)^2 =$

$5^{-3} =$ $10^{-1} =$ $10^{-2} =$ $10^{-3} =$ $7^{-1} =$

$\left(\frac{1}{7}\right)^0 =$ $\left(\frac{1}{7}\right)^2 =$ $\left(\frac{1}{10}\right)^0 =$ $\left(\frac{1}{10}\right)^1 =$ $\left(\frac{1}{10}\right)^{-2} =$

$10^5 =$ $10^{-4} =$ $16^{\frac{1}{2}} =$ $16^{\frac{3}{2}} =$ $16^{\frac{3}{-2}} =$

$(5^{13})^2 =$ $(6^3)^4 =$

$(10^4)^{-3} =$ $(6^{-3})^4 =$

$\log_5 25 =$ $\log_5 125 =$

$\log_5 \frac{1}{5} =$ $\log_5 \sqrt{5} =$

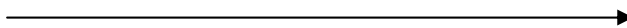
$\log_{10} 10000 =$ $\log_{10} 0.00001 =$

二、作下列各函數圖形

1. 作 $f(x)=1^x$ 的圖形

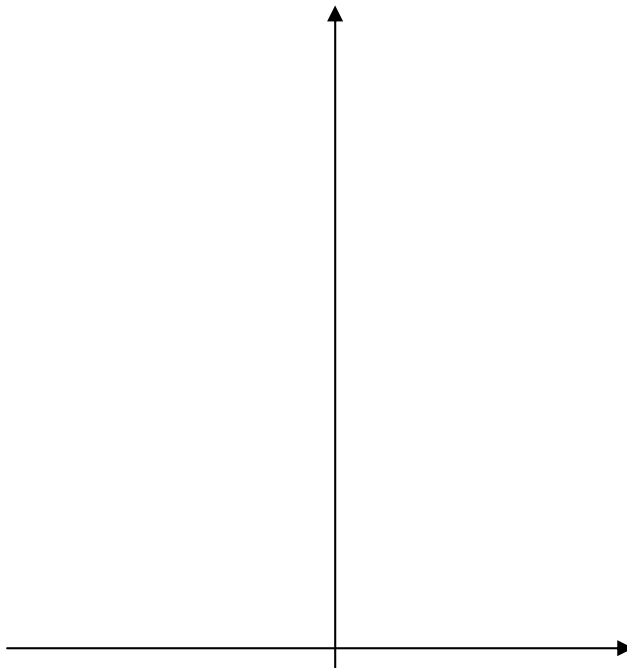
2. 作 $f(x)=2^x$ 之圖

x	$Y=2^x$
-2	
-1	
0	
1	
2	



3. 練習：作 $f(x) = \left(\frac{1}{2}\right)^x$ 之圖

x	$Y = \left(\frac{1}{2}\right)^x$
-2	
-1	
0	
1	
2	



4. 作 $y = \log_2 x$ 圖形

三、填充題：

1. 指數函數 $f(x) = a^x$ 一定通過_____的點
2. $\log_{10} x = 3.8$ 則 x 為 () 位數
3. 常用對數是以_____為底數的對數。

四、 $\log 2 = 0.3010$, $\log 3 = 0.4771$, $\log 5 = 0.6990$

求 $\log_3 5 =$

五、將下列各數化為科學記號並求其對數

1. $1.48 =$
2. $21500 =$
3. $0.00324 =$
4. 求 $\log 1.48 =$
5. 求 $\log 21500 =$
6. 求 $\log 0.00324 =$