Mathematics Department – Langholm Academy

HIGHER HOMEWORK UNIT 1

CHAPTER 2.2

Exponential & Log Functions

Higher - Unit 1
Exponential & Log Functions

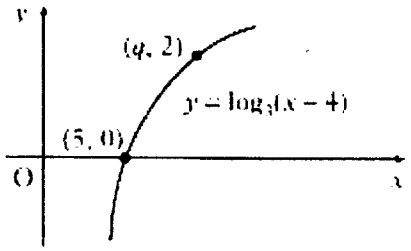
1. Sketch the following graphs

   a. $y = 2^x$
   b. $y = 2^x + 1$
   c. $y = 2^{x-1}$
   d. $y = -2^x$

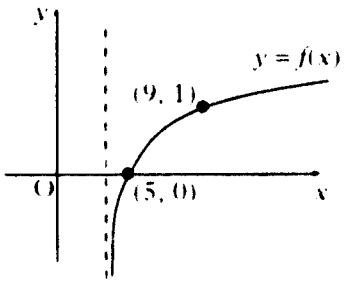
2. Sketch the following graphs

   a. $y = \log_3 x$
   b. $y = \log_3 x + 1$
   c. $y = \log_3(x+1)$
   d. $y = 2\log_3 x$
   e. $y = -\log_3 x$
   f. $y = \log_3(x-2)+1$

3. The diagram shows part of the graph of $y = \log_3(x-4)$, what is the value of q?



4. The function is of the form $f(x) = \log_b(x-a)$.
   a. What are the values of a and b.
   b. State the domain of f.



5. The diagram shows part of the graph $y = 2^x$
   a. Sketch the graph of $y = 2^{-x} - 8$
   b. Find the coordinates where it crosses the x and y axis.