

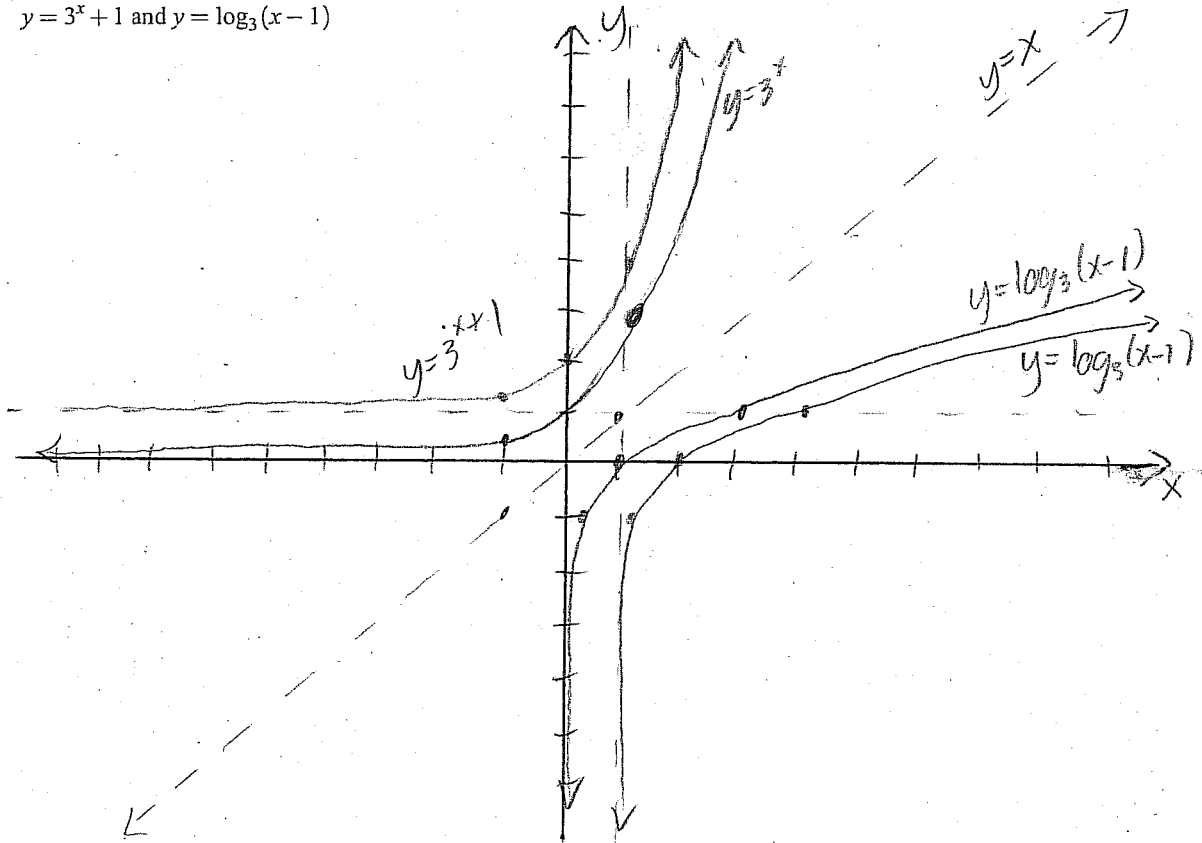
Quiz 7

This quiz is graded out of 10 marks. No books, notes, graphing calculators or cell phones are allowed. You must show all your work, the correct answer is worth 1 mark the remaining marks are given for the work. If you need more space for your answer use the back of the page.

Question 1. pg.133#78 (6 marks)

Graph each pair of functions on the same axes, with $y = x$:

$$y = 3^x + 1 \text{ and } y = \log_3(x - 1)$$



Question 2. pg.142#36 (4 marks)

Express as a single logarithm with coefficient of one:

$$\begin{aligned} \frac{1}{2} \log x + \frac{3}{2} \log 2y - \log x^2 y &= \log \sqrt{x} + \log (2y)^{\frac{3}{2}} - \log x^2 y \\ &= \log \frac{\sqrt{x} \sqrt{8} (y)^{\frac{3}{2}}}{x^2 y} \\ &= \log \frac{2\sqrt{2} \sqrt{y}}{x^{\frac{3}{2}}} \end{aligned}$$