Feedback on In-class Test 1, 2013

The errors students made were just the same as last year. I did advise you to read the feedback for last year's test but most students ignored this advice, to their cost.

Common errors:

Question 1: This was to test your knowledge of BDMAS. So for example to calculate

$$31/(7+11) - 2$$

first work out the expression in brackets, to give $31/18 - 2$, now do the division, giving

$$\frac{31}{18} - 2$$

and finally do the subtraction to give

$$\frac{31}{18} - 2 = \frac{31}{18} - \frac{36}{18} = \frac{-5}{18}.$$

The usual error was to do the subtraction before the division and go from $31/18 - 2$ to $31/(18 - 2) = 31/16$.

Question 2: You were asked to express the answer as a fraction, that is (see question 1) in the form $\frac{p}{q}$ where p is an integer and q is a natural number. Many students gave answers such as

$$\frac{8}{-13}$$

where the denominator (i.e. the q) is a negative integer and hence *not* a natural number.

Question 3: For some inexplicable reason some students interpreted $(p - (q - 1))$ as $(-p) \times (q - 1)$ and so evaluate is as $-pq + p$ rather than the correct $p - q + 1$. I still have no idea why.

Question 4: Some students seemed to think that

$$(1 - x)(2 + x)(x + 1)$$

was
$$(1-x)(2+x) + (1-x)(x+1) + (2+x)(x+1).$$

If you were one of them revise the relevant section of the notes.

Question 6: rather too often students got this wrong because they couldn't add fractions, or they didn't even try and hence did not give the answer in the required form.

Question 7: Again a common way to lose marks was to not give the answer in the required form, e.g.
$$\frac{4}{3}\ln u - \frac{1}{6}\ln v$$

Question 8: The main failing here was not knowing the change of base formula, despite a very similar question appearing on the practice test in the notes.

Finally lots of even quite good students lost marks through simple carelessness. If you don't run out of time make sure that you check your working.