Dawson College: Functions and Trigonometry: 201-009-50-C2: Fall 2008

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Quiz 2

This quiz is graded out of 10 marks. No books, calculators, notes 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.19#8c *(2 marks)* Factor completely:

$2x^6 + 8x^5 - 42x^4$

$= 2x^4(x^2 + 4x - 21)$

$= 2x^4(x+7)(x-3)$

Question 2. pg.27#7i *(4 marks)* add, subtract and simplify:

$\frac{2}{x-2} - \frac{2}{x+2} + \frac{3}{x^2-4}$

LCD $= (x-2)(x+2)$

$= \frac{2}{x-2} - \frac{2}{x+2} + \frac{3}{(x-2)(x+2)}$

$= \frac{2(x+2)}{(x-2)(x+2)} - \frac{2(x-2)}{(x-2)(x+2)} + \frac{3}{(x-2)(x+2)}$

$= \frac{2x+4-2x+4+3}{(x-2)(x+2)}$

$= \frac{11}{(x-2)(x+2)}$

Question 3. pg.25#4l *(4 marks)* Divide and simplify:

$\frac{x^3-x}{x^2-3x-4} \div \frac{x-x^2}{x^2-16}$

$= \frac{x(x^2-1)}{(x-4)(x+1)} \cdot \frac{(x+4)(x-4)}{-x(x-1)}$

$= \frac{-(x+1)(x-1)(x+4)}{(x+1)(x-1)} = -(x+4)$