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**Algebraic Methods: Algebraic Division 2 - Edexcel Past Exam Questions**

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1. Given that

$$\frac{3x^4 - 2x^3 - 5x^2 - 4}{x^2 - 4} \equiv ax^2 + bx + c + \frac{dx + e}{x^2 - 4}, \quad x \neq \pm 2$$

find the values of the constants  $a$ ,  $b$ ,  $c$ ,  $d$  and  $e$ .

(4)  
June 13 Q1

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- 2.

$$f(x) = \frac{x^4 + x^3 - 3x^2 + 7x - 6}{x^2 + x - 6}, \quad x > 2, \quad x \in \mathbb{R}.$$

(a) Given that

$$\frac{x^4 + x^3 - 3x^2 + 7x - 6}{x^2 + x - 6} \equiv x^2 + A + \frac{B}{x - 2},$$

find the values of the constants  $A$  and  $B$ .

(4)  
June 16 (edited) Q6

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