Marked example 1

Paper 1 style · No calculator

1 6 marks AHL 2.15 ●●○ Typical

Answer the following without a calculator.

(a) Solve the inequality $\frac{2x+1}{x-3} \leq 1$. **[4]**

(b) Solve the inequality $x^3 > 4x$. **[2]**

MARKSCHEME (a)

$\frac{2x+1}{x-3} - 1 \leq 0, \ \frac{x+4}{x-3} \leq 0$ **M1A1**

critical values -4 and 3 **(A1)**

$-4 \leq x < 3$ **A1**

Total 4 marks

Note M1 for one side zero, not multiplying by $x-3$.

Note Both inequality signs right.

MARKSCHEME (b)

$x(x-2)(x+2) > 0$ **M1**

$-2 < x < 0$ or $x > 2$ **A1**

Total 2 marks

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