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A LEVEL MATHS

(17) Graphing Inequalities

WORKING AT D/E

(1) $f(x) = 4$ and $g(x) = x^2$

(a) Sketch the graphs of $y = f(x)$ and $y = g(x)$ on the same set of axes.

(b) Find the coordinates where the graphs of $f(x)$ and $g(x)$ meet.

(c) Hence, find the values of x for which $f(x) > g(x)$

WORKING AT B/C

(1) $f(x) = 32 - x^2$ and $g(x) = x^2$

(a) Sketch the graphs of $y = f(x)$ and $y = g(x)$ on the same set of axes.

(b) Find the coordinates where the graphs of $f(x)$ and $g(x)$ meet.

(c) Hence, find the values of x for which $f(x) \leq g(x)$

WORKING AT A*/A

(1) $f(x) = 28 - x$ and $g(x) = x^2 + k$, $0 < k < 28$

(a) Sketch the graphs of $y = f(x)$ and $y = g(x)$ on the same set of axes.

(b) Given that the set of values for which $f(x) > g(x)$ is $-5 < x < 4$, find the value of k.