Name: _____ 5-a-day Further Maths

20th September

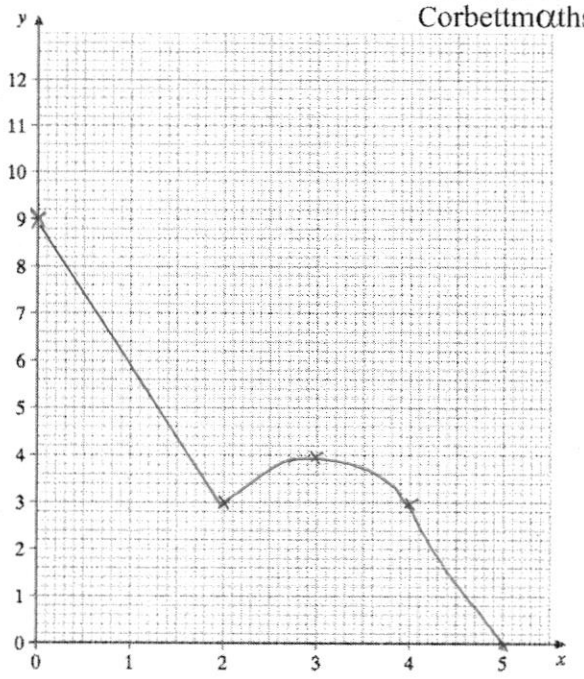
Corbettmaths

A function f(x) is defined as

$f(x) = 9 - 3x \qquad 0 \leq x < 2$

$= (5 - x)(x - 1) \qquad 2 \leq x \leq 5$

Draw the graph of $y = f(x)$



Write down the equation of a circle with centre $(-5, 3)$ and radius $\sqrt{7}$

$(x+5)^2 + (y-3)^2 = 7$

Solve the simultaneous equations

$2x + 4y - z = 15 \quad (1)$

$3x + 8y + z = 44 \quad (2)$

$x + 2y + 2z = 15 \quad (3)$

(1) + (2) $5x + 12y = 59$

(1) × 2 + (3) $5x + 10y = 45$

$2y = 14$

$\Rightarrow y = 7$

$x = -5$

$-15 + 56 + z = 44 \Rightarrow z = 3$