5(a)	$fg(x) = f(g(x))$	M1 May be stated or implied
	$f\left(\frac{20}{x-5}\right) = \frac{20}{x-5} + 4$	B1
	Domain: Must satisfy both $x \geq 6$ and $\frac{20}{x-5} \geq 10$	M1
	$\frac{20}{x-10} \geq 10$ $20 \geq 10x - 50$ $70 \geq 10x$ $7 \geq x$ Hence, domain is $6 \leq x \leq 7$	B1
	Since $y = \frac{20}{x-5} + 4$ is $y = \frac{1}{x}$ after a stretch and a translation, the extrema of the range occur at the ends of the domain's interval may be stated or implied A graph is also sufficient to convey this	M1
	At least one of, $\frac{20}{6-5} + 4 = 24$ **or** $\frac{20}{7-5} + 4 = 14$	M1
	Range: $14 \leq fg(x) \leq 24$	B1 **[7]**
5(b)	If the domain for $g(x)$ is changed to $x < p$ then the output from $f(x)$ must also be less than p	M1 May be stated or implied
	Hence, $x + 4 < p$ $x < p - 4$	B1
	We also still have the original restriction for $f(x)$ as $x \geq 10$ Putting these together, for $gf(x)$ to be possible, $10 \leq x \leq p - 4$	B1
	Hence, largest value of p where $gf(x)$ **cannot** be formed is 14	A1 **[4]** **[11 marks]**