	Fun	Functions and Equations		
CAN M	REVI	SE THIS OPIC	CHECK YOUR ANSWERS	> 
1	f(x) = 2x - 9	g(x) = 7x + 1		
1 (a)	Solve fg( <i>x</i> ) = 35			[3 marks]
1 (b)	Solve $f^{-1}(x) + g^{-1}(x)$	Answer;) = 5		[4 marks]
1 <sup>st</sup>		Answer		

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2 2	(a)	$f(x) = \frac{8}{x}$ $g(x) = x - 3$ Solve $f(x) + g(x) = 3$	$h(x) = x^2$	[3 marks]
2	(b)	Answer Solve $h(x) = g(4x)$		[3 marks]

2 (c)  $h^{-1}(100) + g^{-1}(3) = f(k)$ where k is a constant.

Answer

Work out the value of k

*k* = \_\_\_\_\_

Solutions

[4 marks]

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	$f(x) = \frac{36}{x^2}$	$g(x) = \sin(x)$	h(x) = 3x	
(a)	Show that $f^{-1}(3) \times$	g(60) is an integer		[4 marks]
(b)	Solve $hf(x) - fh(x)$	= 26		[4 marks]
		Answer		

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Solutions

ŧ	$f(x) = x^2 \qquad \qquad g(x) =$	<i>x</i> + 4	h(x) = x + 2	
l (a)	Show that $fg(x) - fh(x) =$	2g(x) + 2h(x)		[5 mar
(b)	Solve $gf^{-1}(x) = 9$			[3 mar
	Answ	er		

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Solutions

	$f(x) = x^2$	$g(x) = \frac{x+6}{11}$	h(x) = ax + b	where $a$ and $b$ are integers.
(a)	Solve f( <i>x</i> + 2) =	= g <sup>-1</sup> (x)		[4 marks]
		Answer		
(b)	h(3) = 7 h <sup>-1</sup> (55) = 15 Work out the v	values of $a$ and $b$ .		[5 marks]
	a	=	<i>b</i> =	
ct				

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