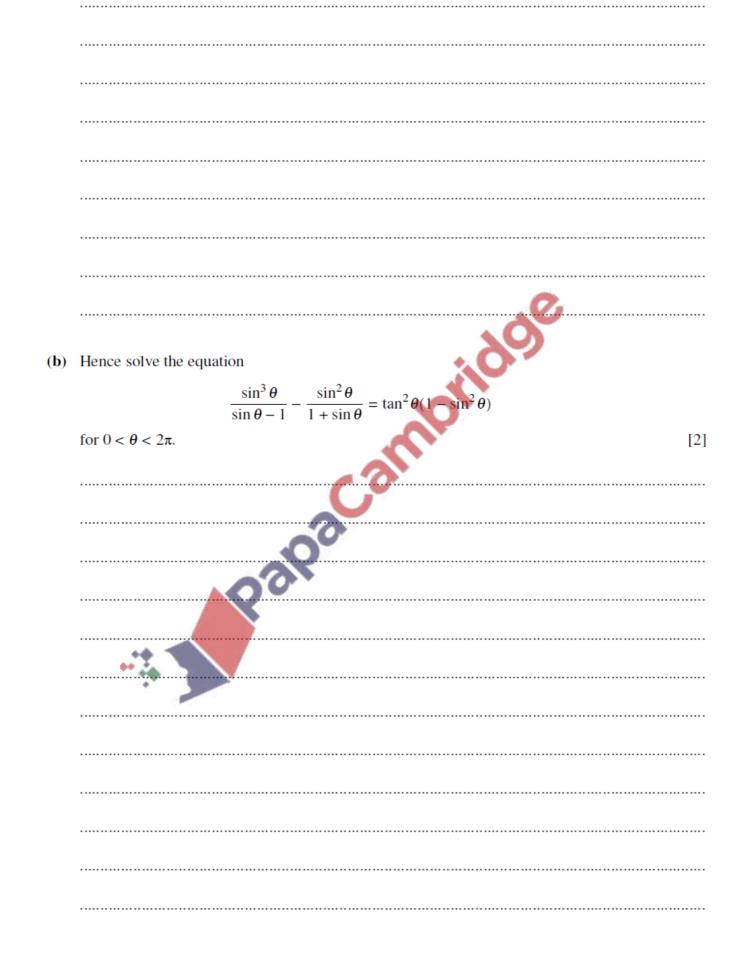
## <u> Trigonometry – 2022 AS June</u>

1.	Marc	h/2022/Paper_9709/12/No.7
	(a)	Show that $\frac{\sin\theta + 2\cos\theta}{\cos\theta - 2\sin\theta} - \frac{\sin\theta - 2\cos\theta}{\cos\theta + 2\sin\theta} \equiv \frac{4}{5\cos^2\theta - 4}$ . [4]
		Ś
		<u> </u>
		C
		<u>so</u>

Hence solve the equation	$\frac{\sin\theta + 2\cos\theta}{\cos\theta - 2\sin\theta}$	$-\frac{\sin\theta - 2\cos\theta}{\cos\theta + 2\sin\theta} = 5 \text{ for } 0^\circ < \theta < 180^\circ.$	
		<u>v</u>	
		.89	
		<u> </u>	
		<u> </u>	
	0	<b>7</b>	
	00		
	Y		
			•••

2.	June	/2022/Paper_9709/11/No.4	
	(a)	$\sin^3 \theta$ $\sin^2 \theta$	[4]
		<i>0</i> .	
		<u>c</u>	
		*	
		**	



e	a)	Given that $k = 3$ , find the exact solutions of the equation $f(x) = 0$ . [5]
C.	<b>u</b> )	Siven that $k = 0$ , find the exact solutions of the equation $f(x) = 0$ .
		<u> </u>
		G

, NOT
$\sim$
<u> </u>

<b>(b</b> )	Use the quadratic formula to show that, when $k > 5$ , the equation $f(x) = 0$ has no solutions.	[5]