<u>Trigonometry – 2023 June A2 Math 9709</u>

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	$\cos^2\theta + 2\sin\theta\cos\theta - 3\sin^2\theta = 0.$	[2]
	C.	
(b)	Hence solve the equation $\sin 2\theta + \cos 2\theta = 2 \sin^2 \theta$ for $0^{\circ} < \theta < 180^{\circ}$.	[4]
		,

Solve the equation $2\cos x - \cos \frac{1}{2}x = 1$ for $0 \le x \le 2\pi$.	[5]
*95	

2. June/2023/Paper_9709/32/No.4

	/2023/Paper_9709/33/No.6 Express $3 \cos x + 2 \cos(x - 60^\circ)$ in the form $R \cos(x - \alpha)$, where $R > 0$ and $0^\circ < \alpha < 90^\circ$. State the exact value of R and give α correct to 2 decimal places. [4]				
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(b)	Hence	solv	e the	equation
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 $3\cos 2\theta + 2\cos(2\theta - 60^{\circ}) = 2.5$

for $0^{\circ} < \theta < 180^{\circ}$.	[4]
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60	
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