MA423 Lab-05

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1 October 2021

Question 4

The condition numbers and the departure from orthonormality for the isometries obtained from the methods(CGS,MGS,CGSREP and QR command) are tabulated below:

Cond number	CGS	MGS	CGSREP	QR Command
10^5	$7.473829*10^{-8}$	$3.674759*10^{-12}$	$5.412349*10^{-16}$	$1.292153*10^{-15}$
10^7	$3.622357*10^{-2}$	$2.884147*10^{-10}$	$5.351506*10^{-16}$	$1.246277*10^{-15}$
10^{11}	$1.422858*10^{-2}$	$2.619321*10^{-6}$	$5.599489*10^{-16}$	$1.518555*10^{-15}$

We can observe that QR command and CGSREP methods give smaller values for departure from orthonormality across all condition numbers whereas CGS ans MGS methods produce poor results.