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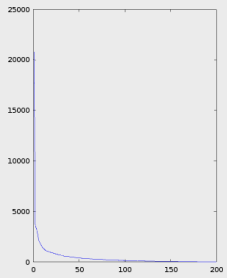
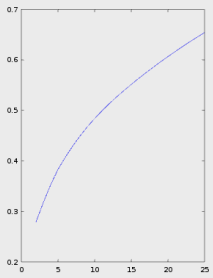
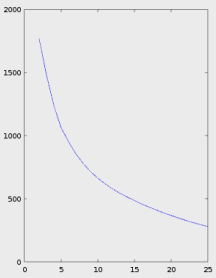
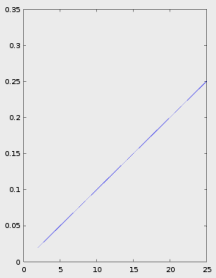
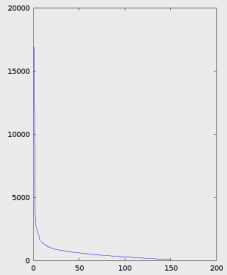


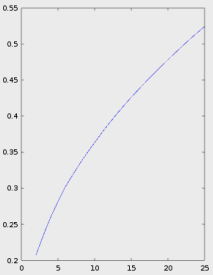


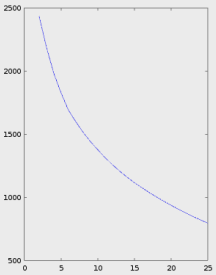




Imaginea 2







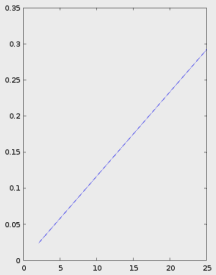
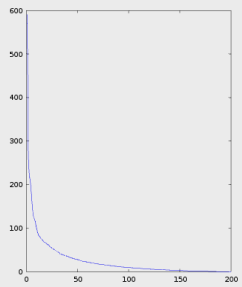
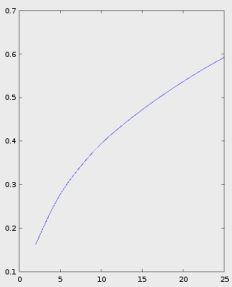


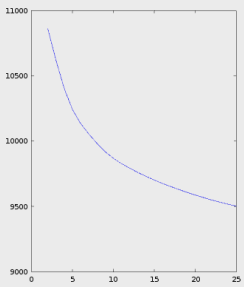
Figura 1 Figura 2 Figura 3 Figura 4

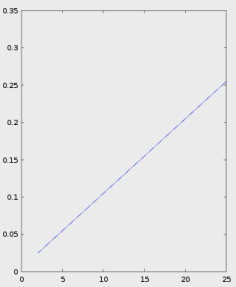
Cerinta 2

Imaginea 1

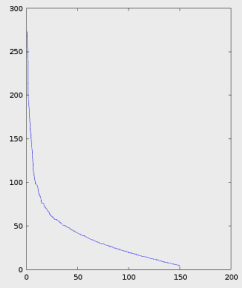


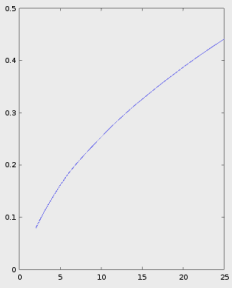


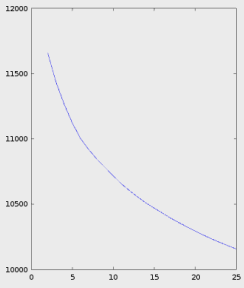




Imaginea 2







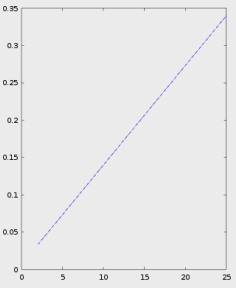


Figura 1 Figura 2 Figura 3 Figura 4

Cerinta 5

Imaginile folosite pentru rezolvarea cerintelor sunt imaginile 1 si 2.

Cerinta 2 a fost realizata prin descompunerea valorilor singulare (DVS).

Cerinta 5 a fost realizata prin analiza componentelor principale.

Figura 1 reprezinta valorile singulare in ordine descrascatoare.

Figura 2 reprezinta informatia data de primele k valori singulare.

Figura 3 reprezinta eroarea aproximarii pentru matricea A

Figura 4 reprezinta rata de compresie a datelor.

Prin DVS primele valori singulare vor fi de 40-50 ori mai mari decat prin analiza componentelor principale .

Dupa cum putem observa prin intermediul DVS se retine mai multa informatie (52-65%) decat prin analiza componentelor principale (43-59%), test realizat pentru 25 valori singulare (aproximativ 1/7 din numarul lor).

Eroarea aproximarii este de asemenea mult mai mare la analiza componentelor principale, in aceasta situatie aceasta scazand mult mai putin fata de rata de scadere in cazul folosirii DVS.

Rata de compresie a datelor este aproximativ similara pentru cele doua procedee, fiind de aproximativ 25-30% pentru k = 25, adica in jur de 1/7 din valorile matricii S.