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NIPTEIL

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Courses » Matrix Solvers

Announcements

Course

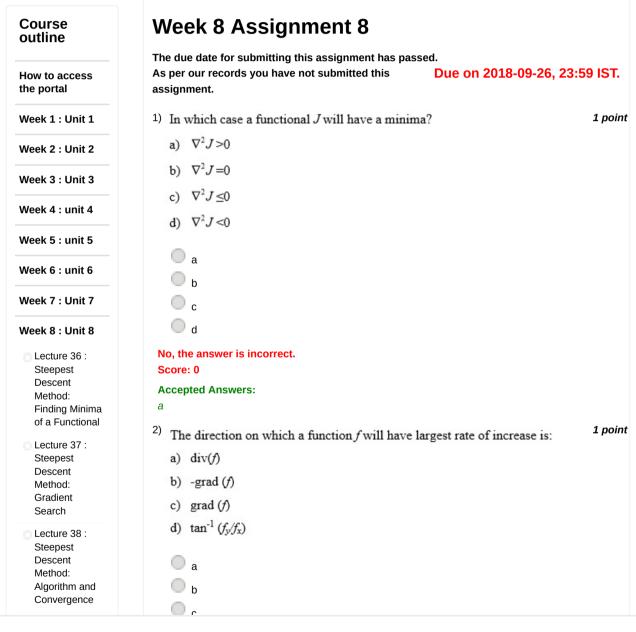
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## Unit 9 - Week 8: Unit 8



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Residual Algorithm	3) I point  For any positive definite matrix A, minimization of $J(x) = \frac{1}{2}x^TAx - bx$	
Lecture Materials	will give solution of	
Quiz : Week 8 Assignment 8	a) $Ax=b$	
Feedback for Week 8	b) $1/2(A^T + A)x = b$ c) $AA^T x = b$	
Week 9 : Unit 9	d) None of the above	
Week 10 : Unit	o a b	
Week 11	С	
Week 12	O d	
Download Videos	No, the answer is incorrect. Score: 0	
Assignment Solution	Accepted Answers: b	
Interactive	4) If the k-th iteration residual in a steepest descent algorithm is $r_k=b-Ax_k$ then	
Session with Students	<ul> <li>a) r<sub>k</sub> is unit vector</li> <li>b) r<sub>k</sub> and r<sub>k+1</sub> are orthogonal</li> </ul>	
	c) $ r_k  >  r_{k+1} $	
	d) Ar <sub>k</sub> =0	
	O a	
	○ b	
	С	
	O d	
No, the answer is incorrect. Score: 0		
	Accepted Answers:	
	5) Minimum residual iterative method is an 1 point	
	a) orthogonal one-dimensional projection method	
	b) orthogonal and multi-dimensional projection method	
	c) oblique and one-dimensional projection method	
	d) oblique and multi-dimensional projection method	
	O a	
	_ b	
	С	
	O d	
	No, the answer is incorrect. Score: 0	
	Accepted Answers:	

С			
6) Rate of convergence in a residue norm method depends on 1 point			
a) Spectral condition number of A.			
b) condition number of A.			
c) Spectral condition number of A <sup>T</sup> .			
d) Spectral condition number $A^{T}A$ .			
a			
■ b			
С			
O d			
No, the answer is incorrect. Score: 0			
Accepted Answers:			
d			
7) <b>1</b> point $A = B - B^T$ . B is not symmetric, Which of the iterative methods will work for $Ax = d$ ?			
<ul> <li>a) Steepest descent</li> </ul>			
b) Jacobi			
c) Residue norm			
d) Minimum residue			
o) Hammidan residue			
□ a			
ь			
С			
O d			
No, the answer is incorrect. Score: 0			
Accepted Answers:			
С			
8) Which of the iterative methods minimize the $L_2$ norm of $b$ - $Ax$			
a) Residue norm			
b) Minimum residue			
c) Steepest descent			
d) Conjugate gradient			
● a			
0 b			
© c			
O d			
No, the answer is incorrect.			
Score: 0			
Accepted Answers:			
b			

9) A steepest descent algorit	hm contains 1 point
a) Only vector vector pro	oducts
b) Matrix-vector and vec	tor-vector products
c) Recursive relations	
d) All of the above	
<b>a</b>	
O b	
0 c	
O d	
No, the answer is incorrect. Score: 0	
Accepted Answers:	
b	
10)	1 point for a diagonally dominant matrix with all positive elements
a) Gauss-Seidel	for a diagonally dominant matrix with an positive elements
b) Minimum residual	
c) Residue norm	
d) Steepest descent	
s, steepest descent	
О a	
○ b	
Ос	
O d	
No, the answer is incorrect.	
Score: 0	
Accepted Answers:	
Previous Page	End
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