Advanced Engineering Mathematics, by Erwin Kreyszig 10th. Ed.

**Problem Set 9.5**

No.1









 It is an ellipse.

No.2



It is a straight line.

No.3



It is a parabola on yz-plane .

No.4







It is a circle of radius 5 onplane .

No.5









It is an ellipse on xy-plane .

No.6







It is an ellipse on xy-plane .

No.7



It is a circular helix .

No.8



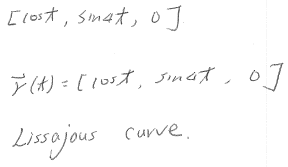






It is a hyperbola on the plane z = 2.

No.9



No.10









A hyperbola on the y=2 plane.

No.11



Or 

No.12



Or 

No.13



Or 

No.14



Or 

No.15



Or 

No.16



Or 

No.17



Or 

No.18



Or 

No.19



Or 

No.20

Set

Then 

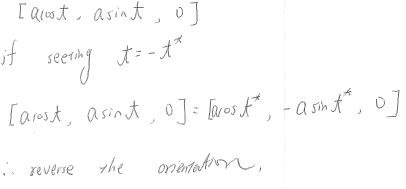


×2+ 

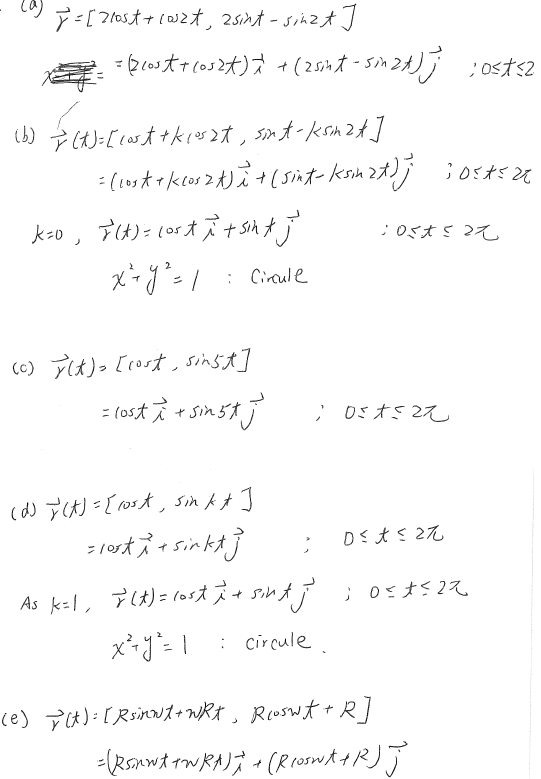
+×3 



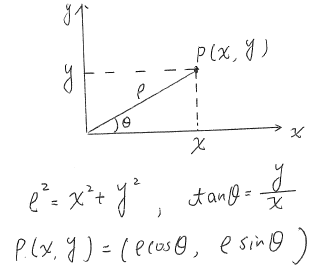
No.21



No.22



No.23



No.24



At 



The tangent  

No.25









At  



The tangent  

No.26







At  



The tangent  

No.27







At  



The tangent  

No.28









At  



The tangent  

No.29





No.30







Point , Point 



No.31







Point , Point 



No.32















Total length 

No.33











No.34

Polar coordinates 

Derive 





















The cardioid 





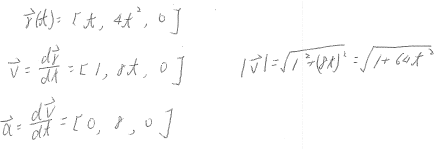








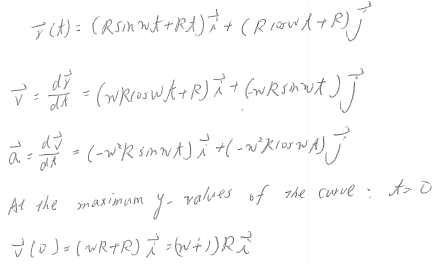
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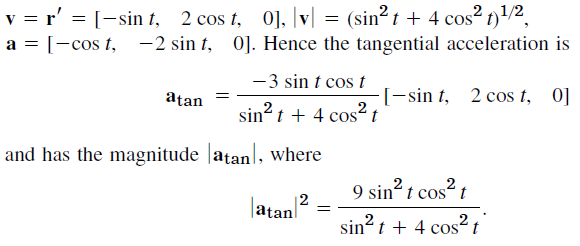
No.36



No.37



No.38



No.39

















No.40



























No.41





















No.42



















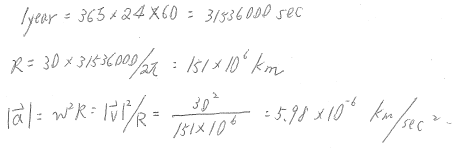




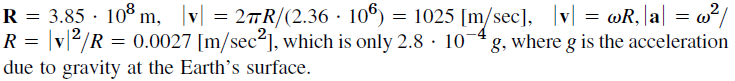




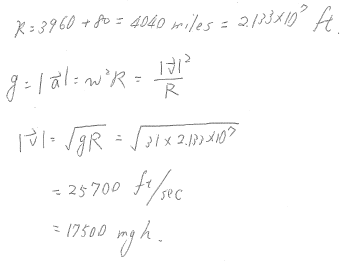
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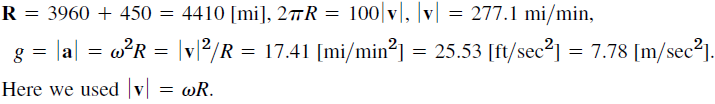
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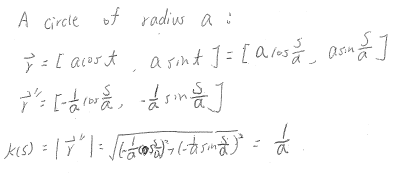
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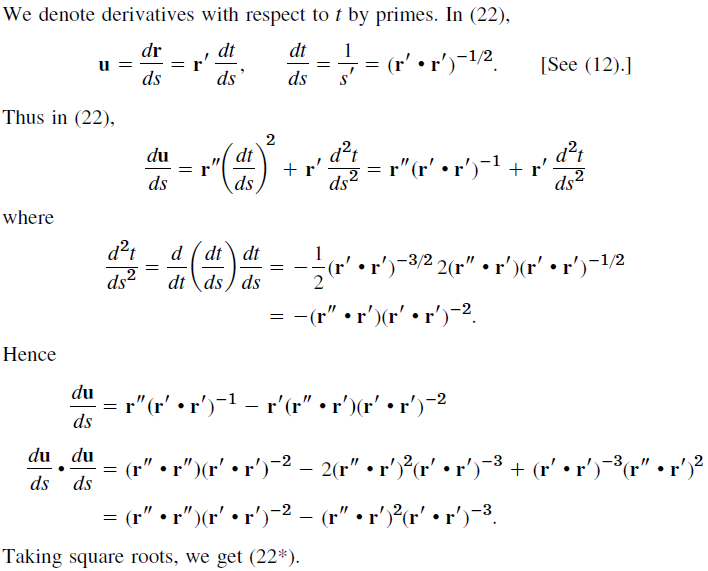
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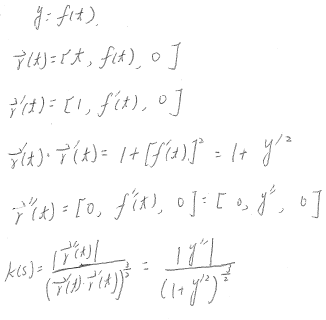
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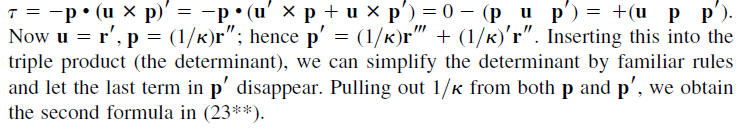
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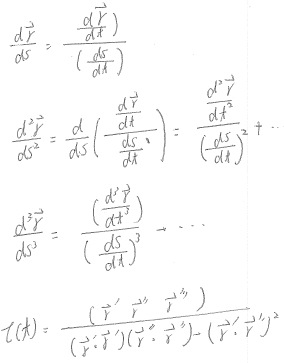
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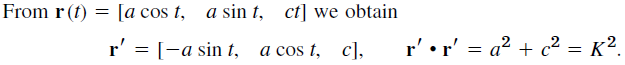
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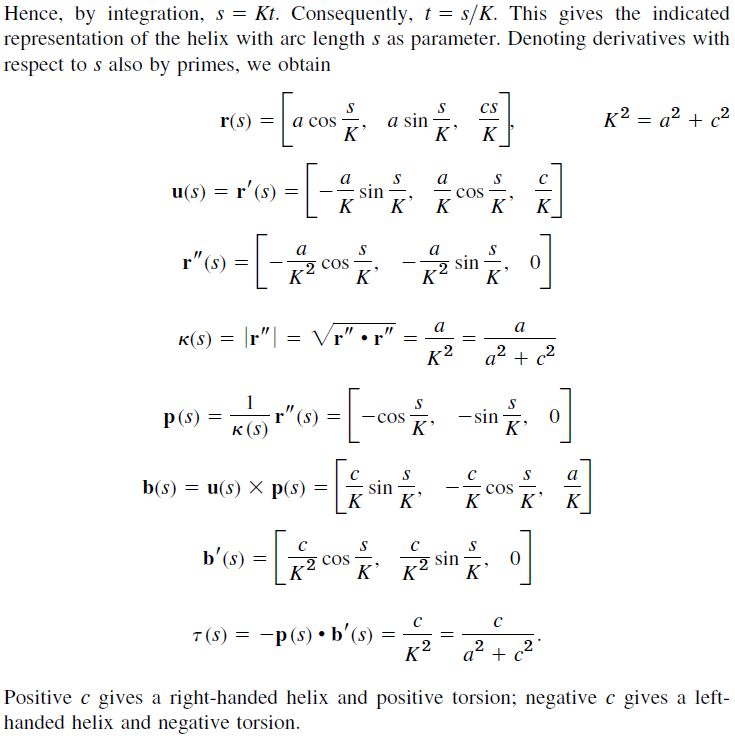


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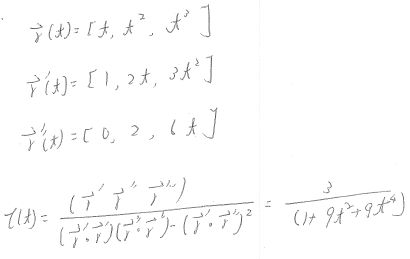


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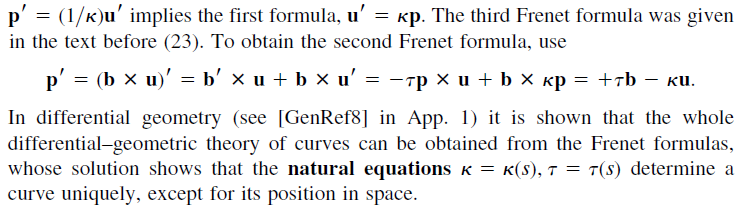




No.53



No.54



No.55

