

Ma 301 Homework

Calculus by Larson and Edwards, 10th Edition

Chapter 11

- 11.1 # 33, 37, 47, 81, 87, 89, 92
- 11.2 # 27, 28, 73, 75, 100, 103
- 11.3 # 7, 9, 21, 23, 27, 37, 67, 71, 73, 77
- 11.4 # 7, 11, 15, 21, 29, 37, 39, 41, 47, 57
- 11.5 # 6-9, 11, 17, 19, 33, 37, 39, 43, 75, 83, 91
- 11.6 # 1-24, 30, 53
- 11.7 # 1-57 odd, 58-63, 65-77 odd, 83-97 odd (really important for later chapters)

Chapter 12

- 12.1 # 3, 8, 9, 11, 13, 15, 17, 19-23, 25, 27, 31, 33, 39, 45, 47, 49, 53, 54, 59, 64, 67, 69, 75, 77-79
- 12.2 # 2, 3, 5, 15, 17, 25, 27, 29, 33, 41, 43, 47, 53, 57, 64
- 12.3 # 3, 4, 11, 15, 19, 21, 27-29, 35
- 12.4-12.5

For each of the following find, graph & interpret all the elements in the moving basis development from a to b . (Note that the value b is only used for arclength.)

If you don't know what all the elements are, find out.

1. at $a = 2$ use $\mathbf{r}(t) = [t, t^2, t^3]$ arclength from $t = 0$ to 2
2. at $a = 2$ use $\mathbf{r}(t) = [2t+4, t-5, 3t+6]$ arclength from $t = 2$ to 5
3. at $a = \pi/4$ use $\mathbf{r}(t) = [3 \cos(t), 3 \sin(t), 4t]$ arclength from 0 to $\pi/4$

Chapter 13

- 13.1 # 1, 2, 3, 5, 7, 13, 15, 17, 23, 25, 35-38, 41-44, 49, 51, 54, 67, 71, 73, 85
- 13.2 # 1, 3, 7, 9, 15, 17, 19, 23, 27, 31, 35, 39, 43, 49, 53, 61
- 13.3 # 3, 7, 15, 21, 23, 27, 31, 33, 37, 39, 43, 45, 49, 53, 80, 89, 93
- 13.4 # 1, 5, 11, 15, 17, 18, 21-23, 37, 39, 41, 43
- 13.5 # 1, 7, 15, 27, 29, 30, 36, 40, 41, 43, 44, 50
- 13.6 # 1, 9, 15, 20, 21, 23, 25, 27, 31, 39-41, 45, 55-59
- 13.7 # 1, 6, 8, 11, 14, 15, 25, 27, 31, 35, 37, 39
- 13.8 # 5, 7, 11, 15, 21, 25, 27, 29, 33, 35, 41, 48, 55
- 13.9 # 1, 3, 7, 11, 17 (do max and min subject to a constraint explicitly and implicitly for all problems)
- 13.10 # 5, 9

Chapter 14

- 14.1 # 13, 15, 19, 23, 41, 42, 47, 49, 51, 55, 57, 59, 65, 67, 79, 80
- 14.2 # 11, 13, 17, 21, 22, 27, 31, 39, 43, 49, 51, 53, 63-66
- 14.3 # 1-9, 13, 17, 19, 21, 23, 27-41 odd, 42-46
- 14.4 # 7, 13, 19, 23, 25, 28, 29, 31
- 14.5 # 3, 11, 17, 25, 27, 29, 31
- 14.6 # 7, 9, 11, 13, 21, 23, 29, 35, 38, 39
- 14.7 # 3, 7, 9, 15, 18, 24, 25, 27, 29, 39, 41
- 14.8 # 9, 15, 17, 19, 23

Chapter 15*

- 15.1 # 1-4, 7, 8, 15, 17, 23, 25, 27, 31, 35, 37, 39, 43, 51, 53, 57, 63, 65-69, 77 (for EC)
- 15.2 # 9, 13, 21, 25, 27, 29, 39, 43, 49, 53, 57, 59
- 15.3 # 3, 7, 9, 11, 15, 23, 25, 29, 47
- 15.4 # 3, 5, 9, 15, 21, 27, 29-33, 39
- 15.5 # 1-13, 15, 21, 25, 27, 29, 31, 33, 37, 39, 43, 45
- 15.6 # 1-31 odd, 32-34
- 15.7 # 1, 3, 5, 9, 13, 15, 17-19
- 15.8 # 1-17 odd, 21, 22

* Homework is recommended only for those sections that are covered in class.