# NOTES, AND HOMEWORK PROBLEMS FOR CALCULUS III

#### YASHA SAVELYEV

#### Basic linear algebra

**Homework set 1.** From 1.5: 1, 4, 5 From 1.6: 1, 2, 3, 8a, 9, 10, 12, 15, 16

#### DERIVATIVES

Homework set 2. 2.1: 1, 2, 3, 4, 5, 7, 8

2.2: 1

3.1 1

3.2 6, 13, 15

3.4 10,11

 $4.1\ 2,\ 3,\ 4$ 

#### Maxima and minima

Homework set 3. 5.1: 5, 6, 12

5.2: 1, 2, 4, 5, 8

Homework set 4. 5.3: 1, 5, 6, 10, 12, 25

## POTENTIAL FUNCTIONS, LINE INTEGRALS

Homework set 5. 6.2: 3, 4

6.3: 7, 8, 9, 10

7.1: 1, 2

7.2: 5, 6, 8

 $8.1:\ 1,\ 2,\ 3$ 

### Homework set 6. 8.2: 1

8.3: 6,9, 15

9.2: 1:a,b,c,d, 2:a,b, 3

## Homework set 7. 9.3: 1,2

10.1: 1:a,b,c, 2

# 1. Surface Integrals Divergence and Stokes Theorem

Homework set 8. 11.3: 1,2

12.1: 2 12.2: 1,2,3

 $E\text{-}mail\ address: \verb|yasha.savelyev@gmail.com||$