

# MATH 221 – Linear Algebra and Applications

## Homework Assignments

These assignments are subject to change. Make sure to check the assignment through Gradescope for official problems for submission.

General homework “rules:”

- If a question requires more than a single expression or equation, then your response must be phrased in complete sentences.
- The logic of a proof must be completely clear for full credit.

### Assignment 1 (*due Tues., August 31*)

- Section 1.1 # 6(a,c,g), 7, 8, 9, 21, 22, 23, 25, 29
- Section 1.2 # 1(b,d,g), 2(b,d,g), 4, 9, 11, 13 (no geometric interpretation necessary), 16, 18

### Assignment 2 (*due Tues., September 7*)

- Section 1.3 # 1(a,c,f), 3(a,d,e), 5, 8, 10, 12
- Section 1.4 # 1, 3(a-f), 4(d,f), 10, 11, 12, 13, 15

### Assignment 3 (*due Tues., September 14*)

- Section 1.5 # 1, 2(a,b), 3(a,c), 4(a), 6, 10, 12, 13, 14
- Section 1.6 # 5, 7, 9, 11

### Assignment 4 (*due Tues., September 21*)

- Section 2.1 # 1(a,c,f), 2, 5, 6, 7, 8, 12(a,b,d), 14
- Section 2.2 # 5, 7, 8

### Assignment 5 (*due Tues., September 28*)

- Section 2.3 # 1(b,d,f), 2(a,c,d), 4, 8, 11, 13(a,b,c), 16
- Section 2.4 # 7, 12
- Section 2.5 # 1(a,f,j), 4, 8, 9, 12, 15, 19(a,b), 22, 23

### Assignment 6 (due Thurs., October 7)

- Section 3.1 # 1, 2(a,c,d), 6, 9(b,c), 10, 12, 13, 14
- Section 3.2 # 1, 2(a,b), 10, 11

### Assignment 7 (due Thurs., October 14) Different due to cancelled class on March 10.

- Section 3.3 # 1, 2, 5(a,b), 8, 10, 11, 14, 15, 19, 21, 22

### Assignment 8 (due Thurs., October 21)

- Section 3.4 # 3(a,b,d), 4, 8, 17, 20, 24

### Assignment 9 (due Thurs., October 28)

- Section 3.6 # 1, 2(a,c,d), 3(a,c,f), 4, 6(a,b), 9, 13, 14(b,c), 15(a,b)

### Assignment 10 (due Thurs., November 4)

- Section 4.1 # 1(a,b), 3, 6, 7, 9, 11, 13, 15
- Section 4.2 # 2(b,c), 3, 6, 7(a,b), 8(a), 9(a), 11, 12(a,b)

### Assignment 11 (due Thurs., November 11)

- Section 4.4 # 2, 5, 8, 11, 13, 14, 16, 22(a,b), additional problems 1-9 (see worksheet 1)
- Section 4.3 # 3, 7, 9, 12, 18, 19, 20, 21, additional problems 1-3 (see worksheet 2)

### Assignment 12 (due Thurs., November 18)

- Section 5.1 # 1(a,b,c), 2, 3, 4, 7, 9(a), 10, 11
- Section 5.2 # 1(a), 3, 4, 5(a,c,f), 7, 8, 10
- (Optional) Section 5.3 # 3, 5, 7

### Assignment 13 (due Thurs., November 30) Different due to end of class.

- Section 6.1 # 1 (as many as you can stand), 2, 3, 4, 6, 10, 12, 14
- Section 6.2 # 1 (as many as you can stand), 3, 4, 6, 11, 16(a-c)
- Section 6.4 # 1, 2, 3, 4, 5, 8, 10, 11, 13
- (Optional) Section 7.1 # 4, 6, 7, 8, 14, 16 )
- (Optional) Section 7.3 # 1, 4, 5, 8, 9, 10, 13, 14