

## HW 1

1.1: 1, 4, 5, 6, 9, 15, 19, 27, 29, 30, 32, 33, 34

Reading. Required background.

1.2: 1, **2**, **4**, 5, **6**, 7, 9, **10**, 13, 15, 16, 18, 21,  
22, 24, 26, 29, 31, 32, 33, 35, 40, 41

1.3: 2, 3, 5, 6, **8**, 10, 11, 13, **14**, 23, 25, 26, 33

Exercise 1.3-8 image: <http://www.math.utah.edu/~gustafso/exercise1.3-8-EdwardsPenne>

1.4: 2, 3, 4, **6**, 9, **12**, 13, **18**, 19, 20, 21,  
**22**, **26**,  
36, 41, 42, 45, 46, 49, 51, 56, 59

## HW 2

1.5: 1, 7, **8**, **10**, 13, **18**, **20**, 21, 23, 24, 33,  
**34**, 36, 39

EPbvp 3.7: 1, 2, **4**, 7 [LC and RC circuits, more after 5.6]

2.1: 1, 3, 4, 6, **8**, 10, 12, **16**, 22, 23, 33, 37

2.2: 5, 7, 8, 9, **10**, 11, 15, 17, **18**

2.3: 2, 3, 9, **10**, 13, 14, 17, 18, 19, **20**, **22**, 24, 25

## HW 3

2.4: 2, 3, 4, **6**, 10, 12, 17 Euler's method

2.5: 3, 4, 5, **6**, 10, 12 improved Euler or Heun

2.6: 3, 4, 5, **6**, 10, 12 Runge-Kutta

This computer project uses maple/matlab/mathematica,  
project located at numericalDEproject-S2015.pdf

## HW 4

3.1: 1, 4, 6, 7, **8**, 9, 11, **12**, **16**, 17, 19, 23, 24,  
**26**, 27, 28, 29, 32, 33, 34

3.2: 7, 8, 9, **10**, 13, **14**, 15, 17, 20, 21, **24**, 25, 29, 30

3.3: **10**, 11, 13, 17, 19, **20**, 33, **34**, 35

HW 5

3.4: 3, 5, 7, 10, 11, 13, 16, 19, 21, **22**, 27, **30**, 31, 32, 33,  
34, 35, **36**, 39, **40**, 44

3.5: 5, 7, **14**, 17, 23, 25, **26**, 33, 43, **44** or **Xc3.5-44a**

3.6: 3, 5, **6**, 11, 17, **20**, 21, 25, 29, **30**, 33,  
30, 31, 37, **40**, 51, 53, **60**

HW 6

4.1: 1, 7, 9, 11, 15, 16, **18**, **20**, 22, 23, 25, 26, 27, **32**,  
33, 34, 35, 36

4.2: 3, **4**, 5, **6**, 7, 9, 11, 15, 17, **18**, 21, 24, 27,  
**28**, 29

4.3: 1, 3, 6, 8, 9, 10, 11, 16, 17, **18**, 23, **24**, 25, **34**

HW 7

4.5: 6, 9, 15, 19, 23, 24, 28: No lecture, not due.

4.6: 2, 3, 5: No lecture, not due.

4.7: 7, **10**, 11, **12**, 19, **22**, 25, 26

5.1: 1, 6, 10, 11, 12, 14, 17, 18, 27, 33, **34**, **36**, 37,  
**38**, 39, **40**, 41, **42**, 43, **46**, **48**, 53

5.2: 1, 2, 5, 8, 11, 13, 16, **18**, 19, 20, 21, **22**, 23, 25, 26

HW 8

5.3: 3, 7, **8**, 9, **10**, 11, **16**, 17, 23, 27, 31, **32**, 37, 40

5.4: 3, 4, 5, 6, 10, 11, 15, 17, 19, **20**, 21, 33, **34**

3.7 EPbvp: 1, 2, 4, 7, **12**, 15, **18**, 19 [electrical  
circuits]

HW 9

5.5: 2, 3, 5, **6**, 10, 11, **12**, 19, 21, **22**, 25, 27, 29,  
31, 34, 39, 43, 45, 47, 51, 52, **54**, 57, **58**, 59

5.6: 3, **4**, 5, 7, **8**, 9, **11**, 13, 15, 17, **18**, 20,  
21, 22

10.1: 1, 3, 7, 9, 11, 13, 17, **18**, 19, **22**, 23, 27, **28**, 29,  
31, 40

HW 10 does not exist. Spring Break.

No Quiz 10. No Lab 10.

HW 11

10.2: 3, 7, 9, **10**, 15, **16**, 17, 19, **20**, 21, 23, **24**, 35, 37

10.3: 3, **6**, 7, 9, **12**, 13, 17, **18**, 20, 23, 27, 28, 29, 30, 32, 34, 37

10.4: **2**, 3, 9, 13, 15, 17, **22**, 23, 26, 27, 29, 30, **36**, 37

10.5: 3, **4**, 7, 9, 11, 13, **14**, 21, **22**, 25, 27, **28**, 31, 33, 34, 37

HW 12

EPbvp 7.6: 2, 5, 6, **7**, **8**, 11, **12**, 18, 21, **22**  
[impulses and Laplace]

6.1: 3, 7, 9, **12**, 13, 15, 17, 19, **20**, 21, 25, 27, 29, 31, **32**, 33, **36**, 37

6.2: 3, **6**, 9, **20**, 21, 23, 24, **26**, 27, **28**, 29, 31, 33, 37

HW 13

7.1: 1, 3, 2, 5, 7, **8**, 11, 12, 15, 17, **20**, 21, 24, 26

7.2: 1, 3, 7, 9, **12**, 13, **14**, 16, 23, 25

7.3: 3, 7, **8**, 11, 13, **20**, 21, 29, **30**, 31, 34, 36, 39, 43, 45, 49

HW 14

7.4: 2, 3, **6**, 8, 9, 12, 13, 14, 16, 17, 18, 21, **24**

9.1: 3, **4**, 5, 7, **8**, 11, 15, 17, **18**

9.2: **2**, 5, 7, 9, **12**, 13, 17, 19, 21, **22**, 23, 29

HW 15

9.3: 5, 7, **8**, **9**, **10**, 11, 18, 19

9.4: 1, 3, **4**, **8**, 9, 10, 11, 13, 14