18.02 Problem Set 6
(Due Tuesday, April 5, 11:59:59 PM)

Part I (140 points)

HAND IN ONLY THE UNDERLINED PROBLEMS
(The others are some suggested choices for more practice.)
EP = Edwards and Penny; SN = Supplementary Notes (most have solutions)

Change of variables
Reading: EP §14.9, SN §CV
Exercises:
EP §14.9 7, 9, 10, 12, 20, 28, 29
EP §14.Misc 54
SN §3D 2

Triple integrals in spherical and cylindrical coordinates
Reading: EP §14.7
Exercises:
EP §14.7 3, 10, 15, 22, 28, 35, 37, 38, 40, 42

Vector fields, curl, divergence
Reading: EP §15.1, SN §§V1, V8
Exercises:
EP §15.1 11-14, 22, 28, 31, 32, 34, 36, 37, 38, 39
SN §6A 4

Line integrals in the plane and in space
Reading: EP §15.2, SN §V11
Exercises:
EP §15.2 5, 8, 11, 12, 13, 18, 31, 33
SN §6D 2, 6
Path independence and conservative fields
Reading: EP §15.3, SN §§V2, V11
Exercises:
EP §15.3 3, 6, 11, 30, 31, 35

Gradient fields and potential functions
Reading: EP §15.3, SN §V12
Exercises:
EP §15.3 17, 23, 25, 34
SN §4C 2, 3
SN §6E 4, 6