Problem 1.

Exercise 5.1.3 from page 227.

Problem 2.

Extend the claculations of Example 5.1.4 (pp.224-225) to the case when $f_Y(y) = \int f_{X,Y}(x, y) \times dx$ (the marginal probability density of Y) vanishes for some values of y (see Remark on p.225.)

Problem 3.

Exercise 5.1.4 from page 227.

Problem 4.

Exercise 5.1.5 from page 227.

Problem 5.

Exercise 5.1.8 from page 230.

Problem 6.

Exercise 5.1.9 from page 230.

Problem 7.

Exercise 5.1.10 from page 230.

Problem 8.

Exercise 5.2.1 from page 232.

Problem 7.

Exercise 5.2.2 from page 233.

Problem 7.

Exercise 5.2.4 from page 237.