

## Errata and Updates for ASM Exam MAS-II (Third Edition) Sorted by Date

- [9/9/2021] On page 485, in the solution to exercise 38.10, on the last line, change “one N” to “two Ns”.
- [9/9/2021] On page 486, in the solution to exercise 38.15, the signs of the  $\varepsilon_i$  in the table should be reversed; they should also be reversed in the two fractions two and five lines below the table. Thus the table and the following lines should read:

$X_i$ in training set	Nearest two points	Fitted value	$Y_i$	$\varepsilon_i$
4	4,12	$\frac{3+15}{2} = 9$	3	-6
7	4,12	$\frac{3+15}{2} = 9$	8	-1
12	12,14	$\frac{15+22}{2} = 18.5$	15	-3.5
14	14,15	$\frac{22+30}{2} = 26$	22	-4
15	14,15	$\frac{22+30}{2} = 26$	30	4
21	15,22	$\frac{30+53}{2} = 41.5$	40	-1.5
22	15,22	$\frac{30+53}{2} = 41.5$	53	11.5

The MSE on the training data is

$$\frac{(-6)^2 + (-3.5)^2 + (-4)^2 + 4^2 + 11.5^2}{5} = \boxed{42.5}$$

We divide by 5 since no parameters are estimated.

The MSE on the test data is

$$\frac{(-1)^2 + (-1.5)^2}{2} = \boxed{1.625}$$

- [9/9/2021] On page 494, in formula (39.5), a 2 is missing from the numerator. The formula is

$$\text{Residual mean deviance} = -\frac{2 \sum_m \sum_k n_{mk} \ln \hat{p}_{mk}}{n - |T|}$$

- [9/9/2021] On page 543, in the sidebar, 2–3 lines below the displayed equation, switch  $i$  and  $i^*$ : “once for each  $i$  (for the first summand) or for each  $i^*$  (for the second summand)”.

- [9/9/2021] On page 555, in exercise 41.21, replace the last line with the answer choices:

- (A) I only                      (B) II only                      (C) III only                      (D) I, II, and III  
 (E) The correct answer is not given by (A) , (B) , (C) , or (D) .

- [8/24/2021] On page 526, exercise 40.5, while the exercise can be worked out, the second and third bullets are false. The first principal component loading for  $X_1$  is  $1/\sqrt{2}$ , and the first principal component loading for  $X_2$  is negative.

- [8/22/2021] On page 129, in exercise 12.15, in the fourth through sixth bullets, change “Risk group R” to “Risk group T”.

- [8/22/2021] On page 129, in exercise 12.16, on the tenth line, change “Group SR” to “Group S’”.

- [8/3/2021] On page 386, in equation (33.1), change  $\theta_{\text{prop}}$  to  $p(\theta_{\text{prop}}$  and  $\theta_{\text{curr}}$  to  $p(\theta_{\text{curr}}$ , where  $p$  is the prior density function.
- [8/3/2021] On page 388, in equation (33.1), the right parenthesis after “Data” in the denominator should be moved to after  $\theta_{\text{curr}}$ , also in the denominator.
- [7/23/2021] On page 161, in the solution to exercise 14.14, replace the first two lines with:  
Expected claims are  $0.2(1800) = 360$ . The limited fluctuation estimate is based on a credibility factor of  $Z = \sqrt{360/1083} = 0.5766$ , and is

$$0.5766\left(\frac{200}{1800}\right) + (1 - 0.5766)(0.2) = 0.1488$$

Replace the last line with:

The percentage change is  $0.1724/0.1488 - 1 = \boxed{+15.91\%}$ . (E)