

# PSQF 4143: Section 7 Supplemental

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## Answers to More Exercise problems

- Empirical Rule:

1.  $Pr(X \geq 8.1|X \sim ND, \mu = 7, \sigma = 1.1) = .1587$
2.  $Pr(X \leq 4.8|X \sim ND, \mu = 7, \sigma = 1.1) = .0228$
3.  $Pr(5.9 \leq X \leq 8.1|X \sim ND, \mu = 7, \sigma = 1.1) = .6826$

- Z-table:

1.  $Pr(X \leq 5|X \sim ND, \mu = 7, \sigma = 1.1) = .0344$
2.  $Pr(X \geq 7.2|X \sim ND, \mu = 7, \sigma = 1.1) = .4286$
3.  $Pr(4.9 \leq X \leq 7.1|X \sim ND, \mu = 7, \sigma = 1.1) = .5078$
4.  $Z = 1.17; X = 1.17 * 1.1 + 7 = 8.287$
5.  $Z = 1.75; X = 1.75 * 1.1 + 7 = 8.925$