Problem Set 4

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Question 1

We're interested in modeling the historical causes of infant mortality. We have data from 5641 first-born in seven Swedish parishes 1820-1895. Using the "infants" dataset in the **eha** library, fit a Cox Proportional Hazard model using mother's age and infant's gender as covariates. Present and interpret the output.

```
1  infants_surv <- with(infants, Surv(enter, exit, event))
2
3  km <- survfit(infants_surv ~ 1, data = infants)
4  summary(km, times = seq(0, 15, 1))
5  plot(km, main = "Kaplan-Meier Plot", xlab = "Years", ylim = c(0.7, 1))
```
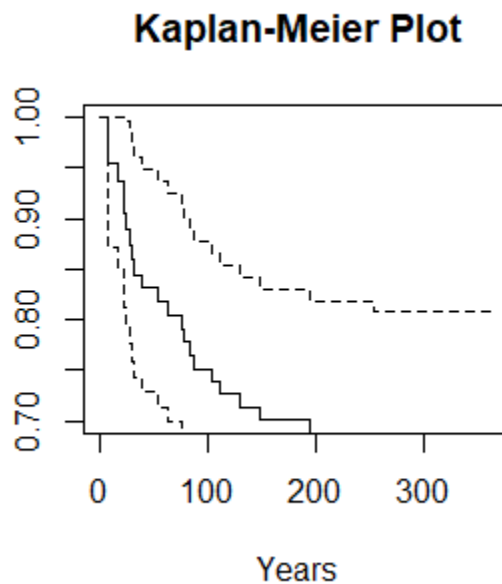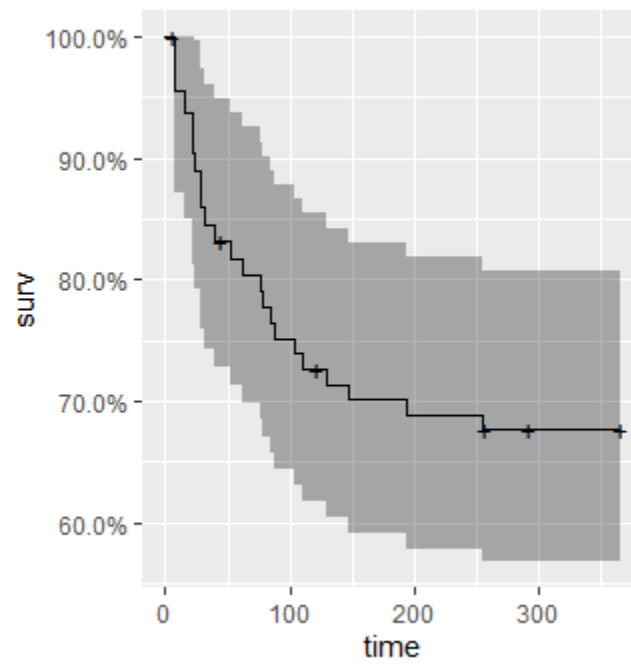
Figure 1: KM Plot 1

Kaplan-Meier Plot

1

Figure 2: KM Autoplot


```r
1  autoplot(km)
```

```r
1  cox <- coxph(infants_surv ~ age + sex, data = infants)
2  cox.fit <- survfit(cox)
3  autoplot(cox.fit)
```

Figure 3: Cox Plot