MATH20802: Statistical Methods
Semester 2
Formulas to remember for the in-class test on 18 April 2018

$\widehat{\theta}$ is an unbiased estimator of θ if $E\left(\widehat{\theta}\right) = \theta$.

The bias of $\widehat{\theta}$ is $E\left(\widehat{\theta}\right) - \theta$.

The mean squared error of $\widehat{\theta}$ is $E\left[\left(\widehat{\theta} - \theta\right)^2\right]$.

If $X \sim Bin\,(n, p)$ then $E(X) = np$ and $Var(X) = np(1-p)$.