Solutions to exercises in MATLAB Handout # 2

As on the handout, MATLAB commands are in bold type.

1. \texttt{marr=[1;0;0;1;0;1];}

2. \texttt{M=[ones(6,1) ed marr];}

3. \texttt{corrcoef(M). NaN means “not a number” and is obtained here because the variance of the}
intercept is zero and so the attempt to calculate correlations involving this variable leads to
division by zero.

4. \texttt{t=[1:1:6];}

5. \texttt{a=[-5:1:5]; normpdf(a,2,5^{-1/2}).}

6. \texttt{normcdf(a,2,5^{-1/2}).}

7. \texttt{x - xnew = 0; note the scaling factor.}

8. The p-value is calculated via \texttt{2*(1-normcdf(2.15,0,1))} and in this case is 0.0316.

9. The percentile is calculated via \texttt{chi2inv(0.95,6)} and the answer is 12.5916.

10. Notice that the digits in the \texttt{a.bf} statement control the amount of output. For \texttt{b = 0}, no
decimals parts are printed out and so the number is zero. For \texttt{b > 0} then the part after the
decimal point is rounded up. The choice of \texttt{a} makes no difference as \(-1 < d/c/t < 0\).