Part 3

Linear Algebra MATH 1104

Address	Presently Read	Change To
Pg 136, Figure 6.1	$x_1 = \begin{bmatrix} 1 \\ -1 \end{bmatrix}$	$x_2 = \begin{bmatrix} 1 \\ -1 \end{bmatrix}$
Pg 140, at the middle of page	$\left[\begin{array}{ccc\|c} 1 & -1 & -1 & 0 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 \end{array}\right]$	$\left[\begin{array}{ccc\|c} 1 & -1 & -1 & 0 \\ 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 \end{array}\right]$
Pg 142, second remark	$P^{-1}AP = B \Leftrightarrow AP = BP$	$P^{-1}AP = B \Leftrightarrow AP = PB$
Pg 143, last line	diagonal entries in P	diagonal entries in D
Pg 145, last line	$\lambda_1 = 0$	$\lambda_2 = 1$
Pg 147, diagonal matrix D	$\begin{bmatrix} -1 & 0 & 0 \\ 0 & -2 & 0 \\ 1 & 1 & 0 \end{bmatrix}$	$\begin{bmatrix} -1 & 0 & 0 \\ 0 & -2 & 0 \\ 0 & 0 & 2 \end{bmatrix}$
Pg 153, at the end of page	or $\begin{bmatrix} -i & 1 \\ -1 & 1-i \end{bmatrix}\begin{bmatrix} x_1 \\ x_2 \end{bmatrix} = \begin{bmatrix} 0 \\ 0 \end{bmatrix}$	or $\begin{bmatrix} -i & 1 \\ -1 & -i \end{bmatrix}\begin{bmatrix} x_1 \\ x_2 \end{bmatrix} = \begin{bmatrix} 0 \\ 0 \end{bmatrix}$
Pg 153, at the end of page	$\left[\begin{array}{cc\|c} -i & 1 & 0 \\ -1 & 1-i & 0 \end{array}\right] \sim \left[\begin{array}{cc\|c} -1 & i & 0 \\ 0 & 0 & 0 \end{array}\right]$	$\left[\begin{array}{cc\|c} -i & 1 & 0 \\ -1 & -i & 0 \end{array}\right] \sim \left[\begin{array}{cc\|c} 1 & i & 0 \\ 0 & 0 & 0 \end{array}\right]$
Pg 157, Definition 7.1	Let u and v be two vectors in, where…	Let u and v be two vectors in R^n, where…
Pg 159, Example 7.12	$u = \begin{bmatrix} 3 \\ -1 \\ 0 \\ 1 \\ -1 \end{bmatrix}$	$v = \begin{bmatrix} 3 \\ -1 \\ 0 \\ 1 \\ -1 \end{bmatrix}$
Pg 164, Example 7.20	$v_4 = \frac{1}{\sqrt{12}}\begin{bmatrix} -1 \\ 1 \\ 1 \\ -1 \end{bmatrix}$	$v_4 = \frac{1}{\sqrt{12}}\begin{bmatrix} 1 \\ 1 \\ 1 \\ -3 \end{bmatrix}$
Pg 166, last line	$rw.v = (rw).(rv)$	$rw.v = (rw).(rw)$
Pg 167, Example 7.29	$v = \begin{bmatrix} 2 \\ 3 \end{bmatrix}$	$w = \begin{bmatrix} 2 \\ 3 \end{bmatrix}$
Pg 175, Exercise Set 7.3, question 1, part b	$B = \left\{\begin{bmatrix} 1 \\ 1 \\ 1 \end{bmatrix}, \begin{bmatrix} -2 \\ 2 \\ 1 \end{bmatrix}, \begin{bmatrix} -1 \\ -1 \\ 2 \end{bmatrix}\right\}$	$B = \left\{\begin{bmatrix} 1 \\ 1 \\ 1 \end{bmatrix}, \begin{bmatrix} -2 \\ 2 \\ 0 \end{bmatrix}, \begin{bmatrix} -1 \\ -1 \\ 2 \end{bmatrix}\right\}$

Appendix B

Pg 203, B.6.1, Exercise. 6	$\lambda_2 - 8\lambda + 16 = 0$	$\lambda^2 - 8\lambda + 16 = 0$
Pg 203, B.6.1, Exercise. 12	$\lambda^3 - 6\lambda^2 + 11\lambda = 0$	$\lambda^3 - 6\lambda^2 + 11\lambda - 6 = 0$
Pg 204, B.6.1, Exercise. 19	$x_2 = \begin{bmatrix} -1 \\ 0 \\ 1 \end{bmatrix}$	$x_2 = \begin{bmatrix} 1 \\ 1 \\ -2 \end{bmatrix}$
Pg 205, B.6.4, Exercise. 1	$P = \begin{bmatrix} 5 & 0 \\ 0 & -2 \end{bmatrix}$	$D = \begin{bmatrix} 5 & 0 \\ 0 & -2 \end{bmatrix}$
Pg 206, B.6.4, Exercise. 5	5. …	5. yes, …
Pg 206, B.7.1, Exercise. 2	21	23

Part 3

Linear Algebra MATH 1104

Pg 206, B.7.1, Exercise. 21	$\begin{bmatrix} \frac{1}{\sqrt{11}} \\ \frac{3}{\sqrt{11}} \\ 0 \\ \frac{-1}{\sqrt{11}} \end{bmatrix}$	$\begin{bmatrix} \frac{1}{\sqrt{11}} \\ \frac{3}{\sqrt{11}} \\ \frac{-1}{\sqrt{11}} \end{bmatrix}$
Pg 206, B.7.1, Exercise. 26	55	53
Pg 206, B.7.1, Exercise. 29	6	$\sqrt{20}$
Pg 206, B.7.1, Exercise. 36	Is orthogonal	Is not orthogonal
Pg 207, B.7.2, Exercise. 2	B=$\left\{\frac{v_1}{\sqrt{30}}, \frac{v_2}{29}, \frac{v_3}{3\sqrt{680}}\right\}$	B=$\left\{\frac{v_1}{\sqrt{30}}, \frac{v_2}{\sqrt{29}}, \frac{v_3}{\sqrt{870}}\right\}$
Pg 207, B.7.2, Exercise. 3	B=$\left\{\frac{v_1}{2}, v_2, v_3\right\}$	B=$\left\{\frac{v_1}{\sqrt{2}}, v_2, v_3\right\}$
Pg 207, B.7.2, Exercise. 12	$\frac{-101}{152}\begin{bmatrix} -4 \\ -8 \\ 18 \end{bmatrix}$	v
Pg 207, B.7.2, Exercise. 13	Only E is orthogonal	A and B are not orthogonal
Pg 207, B.7.2, Exercise. 19	$\theta = 60^0$	$\theta = (61.87)^0$
Pg 207, B.7.3, Exercise. 1		Part b has to be deleted
Pg 207, B.7.3, Exercise. 2, part a	$2\sqrt{6}\begin{bmatrix} \frac{2}{\sqrt{6}} \\ \frac{1}{\sqrt{6}} \\ \frac{1}{\sqrt{6}} \end{bmatrix} + 2\sqrt{3}\begin{bmatrix} \frac{-1}{\sqrt{3}} \\ \frac{1}{\sqrt{3}} \\ \frac{1}{\sqrt{3}} \end{bmatrix} + \begin{bmatrix} 0 \\ \frac{3}{\sqrt{18}} \\ \frac{-3}{\sqrt{18}} \end{bmatrix}$	$2\sqrt{6}\begin{bmatrix} \frac{2}{\sqrt{6}} \\ \frac{1}{\sqrt{6}} \\ \frac{1}{\sqrt{6}} \end{bmatrix} + 2\sqrt{3}\begin{bmatrix} \frac{-1}{\sqrt{3}} \\ \frac{1}{\sqrt{3}} \\ \frac{1}{\sqrt{3}} \end{bmatrix} + 5\sqrt{2}\begin{bmatrix} 0 \\ \frac{3}{\sqrt{18}} \\ \frac{-3}{\sqrt{18}} \end{bmatrix}$
Pg 207, B.7.3, Exercise. 3	$D = \left\{\begin{bmatrix} \frac{1}{\sqrt{10}} \\ \frac{3}{\sqrt{10}} \end{bmatrix}, \begin{bmatrix} \frac{3}{\sqrt{45}} \\ \frac{6}{\sqrt{45}} \end{bmatrix}\right\}$	$D = \left\{\begin{bmatrix} \frac{1}{\sqrt{10}} \\ \frac{3}{\sqrt{10}} \end{bmatrix}, \begin{bmatrix} \frac{3}{\sqrt{10}} \\ \frac{-1}{\sqrt{10}} \end{bmatrix}\right\}$
Pg 207, B.7.3, Exercise. 4	$D = \left\{\begin{bmatrix} \frac{4}{\sqrt{17}} \\ \frac{1}{\sqrt{17}} \end{bmatrix}, \begin{bmatrix} -1 \\ 0 \end{bmatrix}\right\}$	$D = \left\{\begin{bmatrix} \frac{4}{\sqrt{17}} \\ \frac{1}{\sqrt{17}} \end{bmatrix}, \begin{bmatrix} \frac{-1}{\sqrt{17}} \\ \frac{4}{\sqrt{17}} \end{bmatrix}\right\}$
Pg 207, B.7.3, Exercise. 6	$D = \left\{\begin{bmatrix} \frac{1}{\sqrt{2}} \\ 0 \\ \frac{1}{\sqrt{2}} \end{bmatrix}, \begin{bmatrix} \frac{1}{\sqrt{6}} \\ \frac{2}{\sqrt{6}} \\ \frac{-1}{\sqrt{2}} \end{bmatrix}, \begin{bmatrix} \frac{-7}{\sqrt{219}} \\ \frac{11}{\sqrt{219}} \\ \frac{7}{\sqrt{219}} \end{bmatrix}\right\}$	$D = \left\{\begin{bmatrix} \frac{1}{\sqrt{2}} \\ 0 \\ \frac{1}{\sqrt{2}} \end{bmatrix}, \begin{bmatrix} \frac{1}{\sqrt{6}} \\ \frac{2}{\sqrt{6}} \\ \frac{-1}{\sqrt{6}} \end{bmatrix}, \begin{bmatrix} \frac{-1}{\sqrt{3}} \\ \frac{1}{\sqrt{3}} \\ \frac{1}{\sqrt{3}} \end{bmatrix}\right\}$
Pg 208, B.8, Exercise. 8, part b	$\frac{3}{10}$	$2 - 3i$