

Corrections to Thomas L. Harman, Advanced Engineering Mathematics with MATLAB- Page 1/3

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This is a summary of the corrections to the second edition.

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Page xiv Correct Web site in preface: Change www.brookscole.com ... to

<http://www.cengagebrain.com/shop/index.html>

Then enter ISBN number 0-534-37164 and Go to "Free Studey Tools - Access

Page xvi Correct my e-mail in preface- replace harman@cl.uh.edu with harman@uhcl.edu

Page 183 - Add the I after a_0 .

then the matrix equation is

$$A^n + a_{n-1}A^{n-1} + \cdots + a_1A + a_0I = 0.$$

Page 185 - Change λ_1 to λ_2 in the second line of Equation 4.54; change λ_1 to λ_n in the last line of Equation 4.54.

$$\begin{aligned} f(\lambda_1) &= \beta_{n-1}\lambda_1^{n-1} + \cdots + \beta_1\lambda_1 + \beta_0, \\ f(\lambda_2) &= \beta_{n-1}\lambda_2^{n-1} + \cdots + \beta_1\lambda_2 + \beta_0, \\ &\vdots \\ f(\lambda_n) &= \beta_{n-1}\lambda_n^{n-1} + \cdots + \beta_1\lambda_n + \beta_0. \end{aligned} \tag{1}$$

Page 196, Figure 4.4: m_1 in the cart on the right should be m_2

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Page 210 - In Theorem 5.2, third line, separate the a and b in brackets
... with continuous coefficients in the interval $[a b]$. Then, ...

Page 214 - In Example 5.2, change the $t = 1.1$ to $t = 1.005$ in the next to last
line
... selected to start at $t = 1.005$ so that the infinite ...

Page 215 - there is an error in the Figure 5.1: "(2,?10)" should be (2,-10)

Page 238 Equation 5.65 should read

$$\mathbf{x}(t) = e^{At} \mathbf{x}_0 = \mathbf{M} e^{\Lambda} \mathbf{M}^{-1} \mathbf{x}_0,$$

Page 247 Table 5.4 (The sign is wrong in the equation for $\dot{\mathbf{x}}_p(t)$). The function
in column 2 should be:

$$\dot{\mathbf{x}}_p(t) = A\mathbf{x}_p(t) - \mathbf{f}(t).$$

Page 259 MATLAB Script comment should read

```
D2y+2*z*Wn*Dy+Wn^2*y=9.81*U(t)
```

Page 281 Shift the text in the MATLAB script over to the left - some text is
cut off.

Page 287

$$\lim_{n \rightarrow \infty} \left| \frac{a_{n+1}}{a_n} \right| \quad \text{not} \quad \lim_{n \rightarrow \infty} \left| \frac{a^{n+1}}{a_n} \right|.$$

$$\lim_{n \rightarrow \infty} \left| \frac{a_{n+1}}{a_n} \right| = \lim_{n \rightarrow \infty} \left| \frac{2}{n+1} \right| = 0.$$

Page 299 last line: Replace "disk" with "Web site"
... using the MATLAB M-file EX6.7.M on our Web site leads to the following
results:

Page 323 Example 6.14 first line: Replace "constant" with "nonconstant"
... differential equation with nonconstant coefficients

Page 407 in MATLAB program Example 8.14 Correct transform of system

$$H = 1./(\text{sqrt}(w.^4 + 5*w.^2 + 4))$$

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Page 430 in Example 9.5: add the factor e^{-t}

$$y(t) = \frac{1}{2} + \frac{1}{2}\sqrt{2} \cos\left(t + \frac{\pi}{4}\right) e^{-t}.$$

Page 505; Replace $y(z)/z$ with $Y(z)/z$
Analytically, $Y(z)/z$ could be written in terms ...

Page 532 Line after Equation 11.15: Replace n with N .
where p takes the values $0, 1, \dots, N - 1$.

Page 544 W_8^6 not W_6^6