<table>
<thead>
<tr>
<th>Page</th>
<th>Line</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>-12</td>
<td>Change “bounded functions” to “continuous functions”</td>
</tr>
<tr>
<td>11</td>
<td>4</td>
<td>Change “bounded functions” to “continuous functions”</td>
</tr>
<tr>
<td>15</td>
<td>6</td>
<td>Change $|v|<em>{p,\infty}$ to $|v|</em>{\infty,w}$</td>
</tr>
<tr>
<td>23</td>
<td>-9</td>
<td>angle between two vectors $u$ and $v$ in a real space $V$ as follows:</td>
</tr>
<tr>
<td>46</td>
<td></td>
<td>Exercise 2.2.5 Rewrite it as follows:</td>
</tr>
</tbody>
</table>

**Exercise 2.2.5** Let a linear operator $L : V \rightarrow W$ be nonsingular and map $V$ onto $W$. Show that for each $f \in W$, the equation $Lu = f$ has a unique solution $u \in V$.

<table>
<thead>
<tr>
<th>Page</th>
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</thead>
<tbody>
<tr>
<td>50</td>
<td>-3</td>
<td>Change “≤” to “&lt;”</td>
</tr>
<tr>
<td>53</td>
<td>6</td>
<td>Change to “$v(x) = \frac{1}{\lambda} [f(x) + cx]$”</td>
</tr>
<tr>
<td>54</td>
<td></td>
<td>Figure 2.1 The graph is incorrect; following is the correct graph</td>
</tr>
</tbody>
</table>

![Correct Graph](image)

More precisely, show that

$$
\sup_{v,\tilde{v}} \left[ \frac{\|v - \tilde{v}\|}{\|v\|} \div \frac{\|w - \tilde{w}\|}{\|w\|} \right] = \|L\| \|L^{-1}\|
$$
Exercise 2.6.2 Define \( K : L^2(0, 1) \to L^2(0, 1) \) by

\[
Kf(x) = \int_0^x k(x, y)f(y)dy, \quad 0 \leq x \leq 1, \quad f \in L^2(0, 1),
\]

with \( k(x, y) \) continuous for \( 0 \leq y \leq x \leq 1 \). Show \( K \) is a bounded operator. What is \( K^* \)? To what extent can the assumption of continuity of \( k(x, y) \) be made less restrictive?

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Exercise 2.6.2  Change the exercise to the following:

Exercise 2.6.2

Define \( K : L^2(0, 1) \to L^2(0, 1) \) by

\[
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with \( k(x, y) \) continuous for \( 0 \leq y \leq x \leq 1 \). Show \( K \) is a bounded operator. What is \( K^* \)? To what extent can the assumption of continuity of \( k(x, y) \) be made less restrictive?

Exercise 3.5.2 Change “\( P ' \) to “\( x; \)”

Exercise 4.1.2 Include the assumption that \( T \) is continuous

Exercise 4.1.2 Change “coverges” to “converges”

Exercise 4.2.8, line 4 where \( g \) is continuous, \( h \in L^1(a, b) \), and \( h(t) \geq 0 \) a.e. Show that

“Assume \( U \) and \( V \) are real Banach spaces. Let \( F : K \subseteq \)”

Exercise 4.3.7 Change “\( p \geq 2 \)” to “\( p \geq 1 \)”

Exercise 4.3.9 Let \( A \in \mathcal{L}(V) \) be self-adjoint, \( V \) being a real Hilbert space. Define

“Since the collocation solution satisfies \( u_n = P_n \tilde{u}_n, \ldots \)”

Table 11.1 The first two entries for \( n \) should be 2 and 4

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