Errata in the second edition of
No Bullshit Guide to Linear Algebra

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Mistakes to be fixed in v2.3

- **P4.2a** The correct solution is the line $\{(\frac{1}{2}, -\frac{1}{4}, 0) + s(0, -\frac{1}{2}, 1), \forall s \in \mathbb{R}\}$.
- **P6.13a** The matrix given, $\begin{bmatrix} -1 & 0 & 1 \\ 0 & 1 & 0 \\ 0 & 0 & -1 \end{bmatrix}$, is not orthogonal so the answer given for **a)** is wrong. I changed the matrix in part **a)** to be $\begin{bmatrix} \frac{1}{\sqrt{2}} & 0 & \frac{1}{\sqrt{2}} \\ 0 & 1 & 0 \\ \frac{1}{\sqrt{2}} & 0 & \frac{-1}{\sqrt{2}} \end{bmatrix}$, which *is* orthogonal.

Mistakes fixed in v2.2

- **P3.5b** The particular solution should be $(\frac{1}{10}, 0, \frac{3}{5}, 0)$ not $(\frac{1}{10}, \frac{3}{5}, 0, 0)$.
- **P3.6c** The problem as stated had no solution so the answer given in the back was wrong. Problem numbers were changed to fix this.
- **P3.9a** The correct answer is $M^{-1}L^{-1}MK^2$ and not $M^{-1}L^{-1}MK$.
- **P3.16** The answers given for parts **b)** and **c)** were wrong. The correct answer to **b)** is $\begin{bmatrix} \cos^2(\alpha) & -\sin(\alpha) \\ 2\sin(\alpha)-\cos(\alpha) & \sin^2(\alpha) \end{bmatrix}$ and the answer to **c)** is $\begin{bmatrix} \cos(2\alpha) & -\sin(\alpha) \\ 2\sin(\alpha)-\cos(\alpha) & 0 \end{bmatrix}$.
- **E4.5f** The line ℓ given is not parallel to the plane P, so the actual distance is zero (they intersect). In order for the question to make sense I changed the line to be $\ell: \{(0,0,2) + t(1, -\mathbf{1}, 0), t \in \mathbb{R}\}$. The new line ℓ is parallel to P and $d(\ell, P) = \frac{\sqrt{3}}{3}$. With the new equation for line ℓ the answer to **d)** becomes $d(r, \ell) = 2\sqrt{3}$.
- **E7.5** The batteries were drawn with the wrong direction in the figure. The figure has been updated so the currents and KVL equations are now consistent.
- **P7.2** There is a sign error in the third KVL equation when transcribing to matrix form. The currents in the circuit are given by $\vec{I} = R^{-1}\vec{V} = \left(\frac{85}{11}, \frac{80}{11}, \frac{5}{11}, \frac{30}{11}, \frac{25}{11}\right)$. The correct answer to part **d)** is $\vec{I}_1 = \frac{85}{11} \approx 7.7$[A] and $I_5 = \frac{25}{11} \approx 2.27$[A].

Mistakes fixed in v2.1

- **P3.4c** The correct solution set is $\{(\frac{1}{10}, 0, \frac{3}{5}) + \alpha(1, 1, 0), \forall \alpha \in \mathbb{R}\}$.
- **P3.7** The size of the matrix A was changed to 5×5.

- **P3.15** Wrong answers provided. See `bit.ly/2xPjqNg` for the correct solutions.
- **E6.8**: Wrong A^{-1} provided. The inverse of the matrix $\begin{bmatrix} 1 & 4 & 64 \\ 0 & 5 & 14 \\ 0 & 0 & 3 \end{bmatrix}$ is $\begin{bmatrix} 1 & -\frac{4}{5} & -\frac{224}{15} \\ 0 & \frac{1}{5} & -\frac{14}{15} \\ 0 & 0 & \frac{1}{3} \end{bmatrix}$. The exercise was updated changing the matrix A to the simpler $A = \begin{bmatrix} 1 & 4 & 15 \\ 0 & 5 & 5 \\ 0 & 0 & 3 \end{bmatrix}$, whose inverse is the answer A^{-1} provided in the answer key.
- **P4.6a** For the original points p and q provided, the distance is $d(p, q) = \sqrt{29}$. Problem updated to use $p = (4, 7, 3)$ and $q = (1, 1, 1)$ and new answer $d(p, q) = 7$.
- **P4.11** The plane P in the question was changed from $P : 2x - y + 4z = 4$ to $P : 2x - y + 4z = 0$, since in Chapter 4 we discuss only projections onto planes passing through the origin. See computer graphics section for more on projections.
- **P4.15** The answer is correct but there's a stray $\frac{1}{2}$ in the formula for ${}_V[\mathbb{1}]_{B_s}$.

Please let me know if you find any other mistakes: `ivan@minireference.com`.