Common Trigonometry Mistakes
Example: Simplifying an Expression

Sometimes a problem produces numerous mistakes. This one produced enough to justify breaking the mistakes into several separate pages.

The Context

This was a test question. Verify the identity:

$$\frac{\sin(2x)}{\sin(x)} - \frac{\cos(2x)}{\cos(x)} = \sec(x) \quad (\text{where } x \neq \frac{k\pi}{2} \text{ for any integer } k)$$

For the purposes of these web pages the task is phrased as "Simplify the Expression". That's how I teach students to approach identity verification problems: simplify one side of the identity to the other (or simplify both sides *separately* to the same expression).

Continue on to the Mistakes:

- Part (a)
- Part (b)
- Part (c)
- Part (d)
- Part (e)

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