

Common Mistakes

Many students make the same mistakes again and again. Here are some of the most common mistakes.

$$9x + 3 = 5x + 6$$

Rearranging gives $9x + 5x = 6 + 3$

This is wrong. If something changes side it changes sign. We should have $9x - 5x = 6 - 3$

If $x^2 = 9$ then $x = 3$

Every square root has two values. The solutions to $x^2 = 9$ are $x = 3, -3$

The Cosine Rule gives particular trouble. We have to solve $36 = 9 + 16 - 12\cos A$

Many students simplify this to get $9 = 13\cos A$

In fact it should be simplified to $12\cos A = 9 + 16 - 36$

Every student should know how to add fractions, Still I see students writing something like $\frac{2}{3} + \frac{4}{5} = \frac{6}{8}$

To add fractions make a common denominator (bottom number) by multiplying the denominators. Add fractions like this

$$\frac{2}{3} + \frac{4}{5} = \frac{2 \times 5}{3 \times 5} + \frac{3 \times 4}{3 \times 5} = \frac{10}{15} + \frac{12}{15} = \frac{22}{15}$$