Misc

Contents

Problem Solving Matters

General Tips

- Be lazy; only do necessary work
- Write in sentences to explain (especially in proofs)
- Avoid long and/or complicated calculations
- Draw diagrams and make them big
- In diagrams, label things and add lines
- Look for similar shapes (often triangles)

Tips For Sketching Graphs

- Look for symmetries
- Think about periodicity
- Look for turning points (0 derivative)
- Look for asymptotes
- Try values of x like 0, 1, -1, etc.
- If there's a trig function involved, try multiples of π
- See what happens when x tends to 0 or $\pm\infty$

Things To Remember

- $\log_a b \times \log_b a = 1$
- $\log_{a^c} b^c = \log_a b$
- When graphing $y^2 = f(x)$, draw the positive branch of $y = \sqrt{f(x)}$ *and* reflect it in the x axis
- $\log x$ is negative when $0 < x < 1$

STEP Specifics

- Be very careful with the stem; it will be used for the rest of the question
- Explore the stem to get everything out of it that you can
- Check every line of algebra when you write it