IB Maths AA Paper 1 exact values and traps sheet

Exact values to learn

Angle	sin	cos	tan
0	0	1	0
/6	1/2	3/2	1/3
/4	1/2	1/2	1
/3	3/2	1/2	3
/2	1	0	undefined

Signs in each quadrant

Quadrant	Positive
I	sin, cos and tan
II	sin only
III	tan only
IV	cos only

For any other angle: find the reference angle, take the value from the table, then choose the sign from the quadrant.

Surds

- Take out square factors: 48 = 43.
- Rationalise when asked: 1/3 = 3/3 and 1/2 = 2/2.
- (a + b) is never a + b.

Log laws

- log(xy) = log x + log y
- log(x/y) = log x log y
- log(x) = m log x
- log a = 1 and log 1 = 0
- Every argument must be positive. Reject any solution that makes one zero or negative, and say why.
- There is no law for log(x + y).

Before you move on from a question

1. Have you shown the substitution or method, not just the answer?
2. Is the answer exact, unless the question says otherwise?
3. Have you found every solution in the given interval?
4. Have you given coordinates when the question asks for points?
5. Have you rejected any invalid solution and given a reason?
6. Does the sign of your answer make sense?