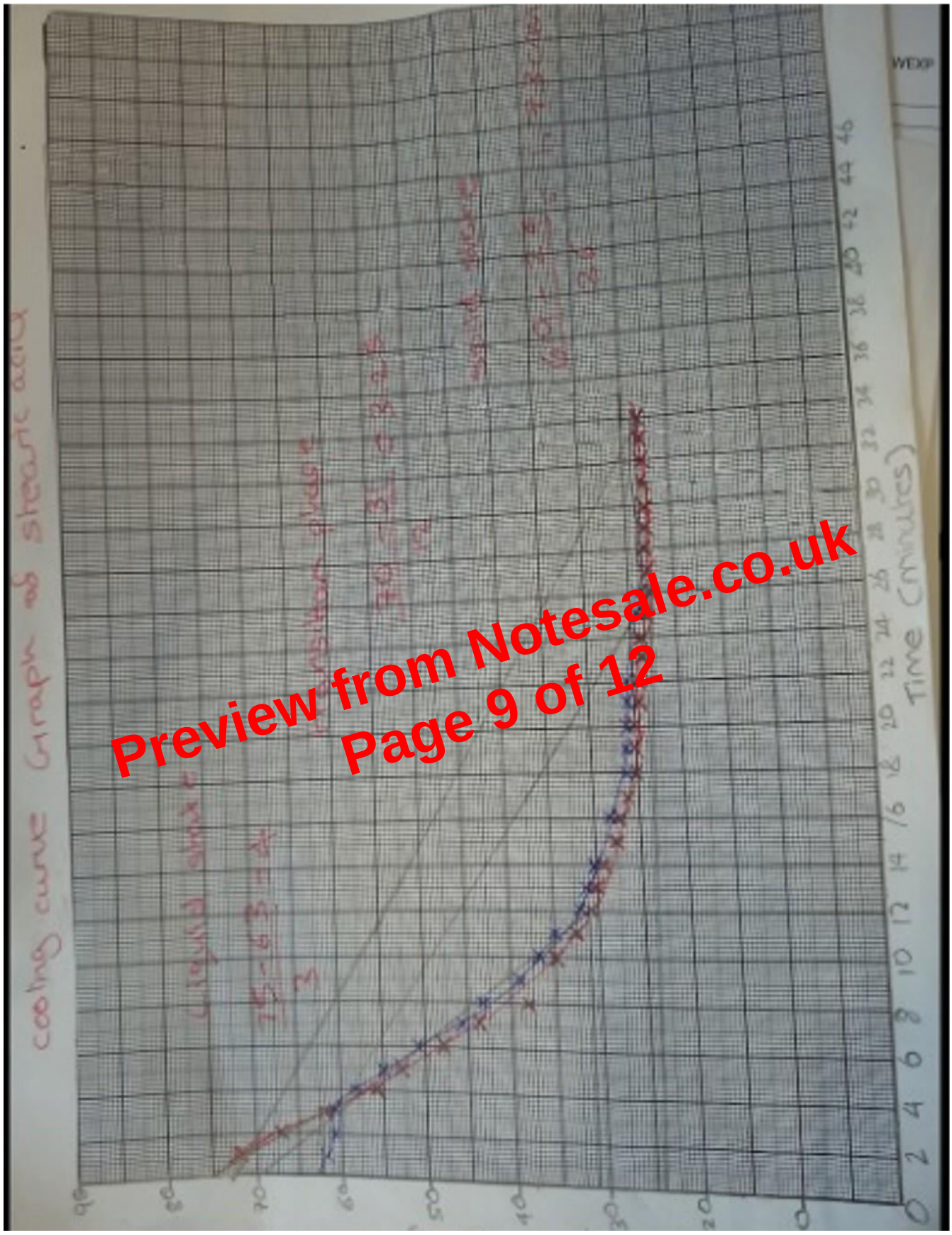
Graph showing the cooling curve of stearic acid:



As the time increases, the temperature of the stearic acid rapidly decreases. In conclusion, the stearic acid in its liquid state changes to solid state as more time goes by due to the decrease in temperature. The

acid was used, which could have led to the rapid loss of its temperature, therefore leading to less time of transition of the acid from its liquid form to its solid form. This would have been prevented by using more stearic acid for this experiment.

Results:

Some temperature readings at different times could have been wrong due to human errors like writing down wrong numbers, repetition of numbers and also, missing out numbers. This could have led to a wrong graph and conclusions, this can be prevented by being careful while recording down numbers in order not to make any unwanted mistakes.

Graph:

While plotting the graph, some points could have been missed or drawn wrongly, this could have led to an inaccurate graph leading to a wrong conclusion of the cooling curve. This could have been prevented by carefully plotting the different points in order to have an accurate graph. Drawing the tangent in order to find the rate of cooling was tricky in that, the procedures below should have been followed: the tangent line should only touch one point of the curve, the opposite angles that were formed by the tangent and the curve should be equal and also, the tangent line should not cross the respective curve. If any of the above procedures had not been followed, a wrong tangent could have been drawn leading to wrong gradient (rate of cooling) results. This could have been prevented by precisely following the above procedures. Calculating the rate of cooling (gradient) using the tangent drawn could have been wrong sometimes due to the use of wrong points and also use of wrong numerical signs during the calculation.