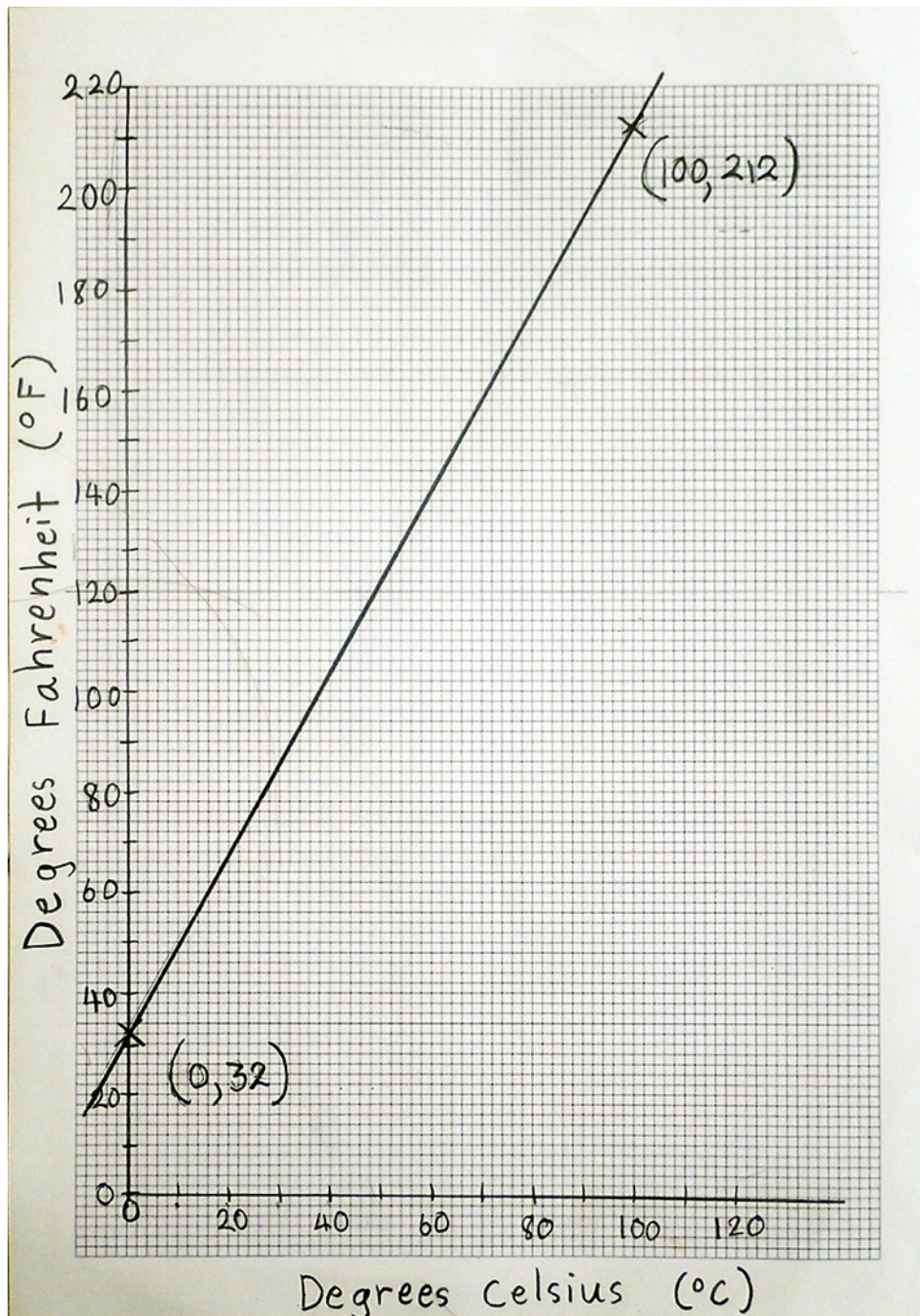# Converting Temperature scales: ºF to ºC

Shannon and Ian Jacobs

To convert from one scale to the other, draw a graph joining two points on both scales (melting ice and boiling water) with a straight line.

Now: if the web says the temperature in New York is 90ºF, I read the graph and find it's 32ºC, which is a coolish day here in Bangkok.

Conversion equations

Suppose I want to convert the temperature I need to heat a sugar mixture when making sugar-glass from 300ºF to ºC.

That is not on my graph.

I need to calculate.

The equation of a straight line in standard form is …

$$y = mx + c$$

The gradient of the line (m) is *rise over run*.

$$(212\text{-}32)/_{100} = {}^9/_5$$

… and the intercept (c) is 32.

To convert degrees Fahrenheit to degrees Celsius we remember the equation …

$$ºF = {}^9/_5ºC + 32$$

To convert the other way: putting ºC on the left gives …

$$ºC = {}^5/_9(ºF \text{ - } 32)$$

A conversion calculator on the web does it this way, and you can do it yourself. I find that 300ºF is about 150ºC and a fever of 40ºC is about 104 in ºF.

I can still ask Siri if I have my phone, and I could download the graph, print it, and put it on the wall if I want to, but it is nice to know how the conversion on the web works.