October 5th

What is the maximum number of points of intersection that can be determined by twenty straight lines?

Every time you draw a new line, it can intersect all of the previous line once each (provided they are not parallel)

So for 2 lines, there is maximum 1 intersection

Draw another line, maximum 1 + 2 = 3 intersections

Draw another line, maximum 1 + 2 + 3 = 6 intersections

So, for n lines there are $1 + 2 + 3 + \ldots + (n - 1) = \frac{1}{2} n(n-1)$

So for 20 lines there are $\frac{1}{2} \times 20 \times 19 =$ **190**