Math 74, Week 5

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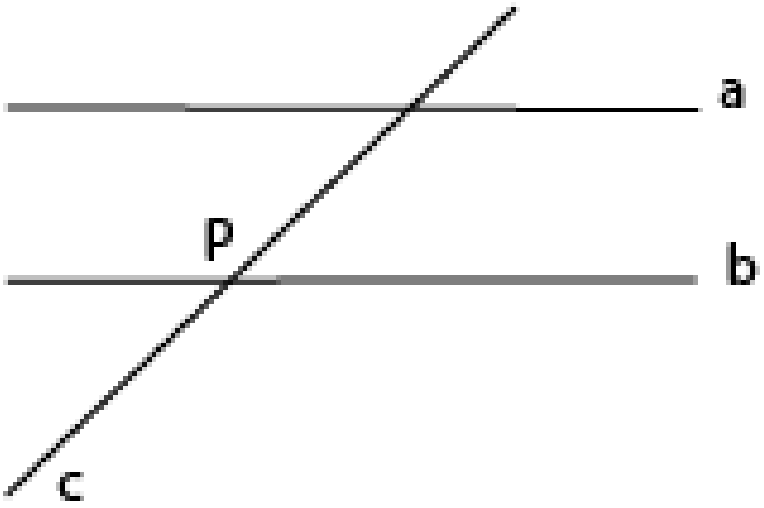
September 22, 2021

1 Mon Lec, 2a

Let the statement: "There isat mostone parallel line to a given line l through a given point P." be statement A;
"If a line intersects one of two parallel lines, both of which are coplanar with theoriginal line, then it also intersects the other." be statement B.
Let ab, and



2 Mon Lec, 3a

3 Mon Dis, 1b

3.1

3.2

$$\prod_{i}^{n} = 2(1 - \frac{1}{n^2})$$

We examine $1 - 1/k^2$ and factor it into $\frac{k^2-1}{k^2} = \frac{(k+1)(k-1)}{k^2}$. Since k is incrementing by 1 in our series, we can cancle each term out. We can expand our series into

$$\frac{1 \times 3}{2^2}\frac{2 \times 4}{3^3}...\frac{(n-1)(n+1)}{n^2}$$
$$= \frac{1}{2}\frac{n+1}{n} = \frac{n+1}{2n}$$