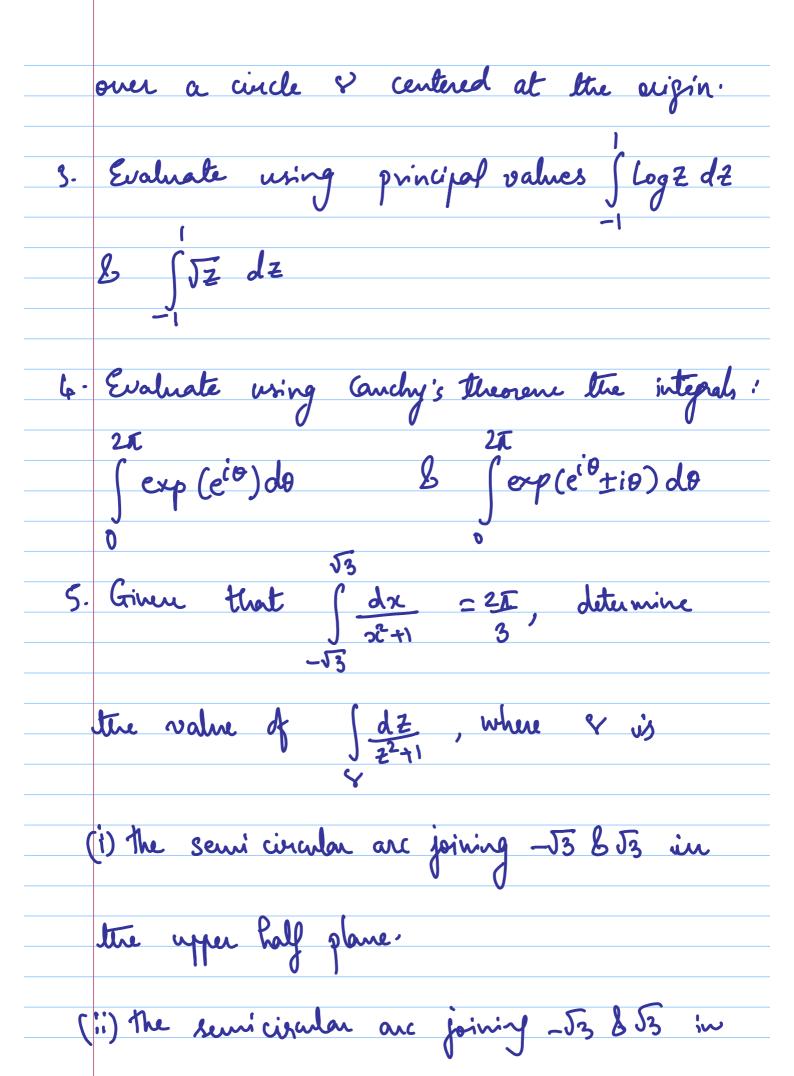
Tutorial-4 1. Compute directly without using Canchy's theorem the integral of dt where Y is the squene ±1±i (traced counter clockwise) & f is: (i) sinz (ii) /22+1 (iii) \(\) (iv) Re(\(\) which of these integrals can be calculated using Cauchy's theorem? 2. Show that if s' is a simple closed come traced counter clockwise, the integral of \$\overline{z} dz\$ equals 2 i Area (8). Evaluate $6\bar{z}^m dz$



the lower half plane. (11) the winde 171= J3 traced clockwise. C. Evaluate: (from dans work) (ii) $\int \frac{dz}{z^3-1}$ (iii) $\int \frac{\cos \pi z}{z^2-1} dz$ |z|=3121=6 (11) Let k be a real constant. Show that

2t kcoso

Se sin (ksino) do = 0 lekcoso (es (ksino) do = 2T