

**Instructions:** Each group is assigned one problem. Within each group, you may work in teams but each of you must write and submit your own solutions. Violators may be penalized up to the maximum credit for the assignment. You must turn in your solutions as a scanned copy via email to [amriksen@thapar.edu](mailto:amriksen@thapar.edu) by 9 pm of May 10, 2020. Maximum credit for this assignment is five points.

**1. Group 1:**

State the *Sokhotski-Plemelj* formula. Derive the formula for the case when the function in the numerator of the integrand is  $f(x) = 1$ .

**2. Group 2:**

State the *Sokhotski-Plemelj* formula. Derive the formula for the case when the function in the numerator of the integrand is  $f(x) = 1$ .

**3. Group 3:**

State the *Sokhotski-Plemelj* formula. Derive the formula for the case when the function in the numerator of the integrand is  $f(x) = 1$ .

**4. Group 4:**

State the *Sokhotski-Plemelj* formula. Derive the formula for the case when the function in the numerator of the integrand is  $f(x) = 1$ .

**5. Group 5:**

State the *Sokhotski-Plemelj* formula. Derive the formula for the case when the function in the numerator of the integrand is  $f(x) = 1$ .

**6. Group 6:**

State the *Sokhotski-Plemelj* formula. Derive the formula for the case when the function in the numerator of the integrand is  $f(x) = 1$ .

□