a+ib form.

① $\frac{3}{1+i} - \frac{1}{2-i} + \frac{1}{1-i} = \frac{3}{1+i} + \frac{1}{1-i} - \frac{1}{2-i}$

$= \frac{3(1-i)+(1+i)}{1(1+i)(1-i)} - \frac{1}{2-i}$

$= \frac{3-3i+1+i}{1-i^2} - \frac{1}{2-i}$

$= \frac{4-2i}{1+1} - \frac{1}{2-i}$

$= 2-i-\left[\frac{1}{2-i} \times \frac{2+i}{2+i}\right]$

$= 2-i-\left[\frac{2+i}{4-i^2}\right]$

$= 2-i-\frac{(2+i)}{5}$

$= \frac{10-5i-(2+i)}{5}$

$= \frac{8-6i}{5}$

$z = \frac{8}{5} - \frac{6i}{5}$

Therefore, $\bar{z} = \frac{8}{5} + \frac{6}{5}i$