$R_1 = 27k\Omega$
$R_2 = 12k\Omega$
$R_E = 4.7k\Omega$
$R_C = 5.6k\Omega$

DC analysis

$$V_B = V_{cc} \cdot \frac{R_2}{R_2 + R_1}$$

$$V_B = 15 \cdot \frac{12k}{12k + 27k}$$

$$V_B = 4.615\ V$$

and $V_E = V_B - 0.7V$

$$V_E = 3.915V \rightarrow I_E = \frac{V_E}{R_E} = \frac{3.915}{4.7k} = 0.833\ mA$$

$$I_C = \frac{\beta}{\beta+1} \cdot I_E = \frac{150}{151} \cdot 0.833 = 0.827\ mA \rightarrow I_B = \frac{I_C}{\beta} = \frac{0.827}{150} = 5.513\ \mu A$$

$$V_C = V_{cc} - I_C R_C = 15 - (0.827\ mA)(5.6k) = 10.369$$

AC analysis

$R_i = R_E \| r_e$

$= 4.7k \| 38$

$= 37.70\Omega$

$r_e = \frac{V_t}{I_E} = 38\Omega$

$R_o = R_c = 5.6k\Omega$

$$A_{Vo} = \left.\frac{V_o}{V_i}\right|_{NL} = \left(\frac{-150}{150+1}\right)\left(\frac{R_c}{r_e}\right)$$

$$= \left(\frac{-150}{151}\right)\left(\frac{5.6k}{38}\right)$$

$$= -146.39$$

$$A_V = \left.\frac{V_o}{V_i}\right|_{FL} = -\left(\frac{150}{151}\right)\left(\frac{5.6k \| 10k}{38}\right)$$

$$= -93.84$$