(1º) $V_{th} = \frac{50\angle 0° \cdot jS}{S + jS - jS} = \frac{50\angle 0° \cdot jS}{S}$

$V_{th} = 50\angle 70° \ V$

$Z_{Th} = \frac{-jS}{S + jS}$

$\frac{-jS}{S\sqrt{2}\angle 45°}$

$\frac{1}{\frac{1}{-jS} + \frac{1}{S\sqrt{2}\angle 45°}}$ ⇒

$\boxed{Z_{Th} = S\sqrt{2}\angle -45°}$

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(2º)

$$V_{AB} = \frac{\frac{10\angle 0^\circ}{j5} + \frac{15\angle 90^\circ}{3} + \frac{20\angle 0^\circ}{-j4}}{\frac{1}{j5} + \frac{1}{3} + \frac{1}{-j4}}$$

$$\boxed{V_{AB} = 23,73\angle 81,47^\circ\ V}$$

(3º) $I_2 = \dfrac{(23,73 \angle 81,47°\,V) - (20 \angle 0°\,V)}{-j4}$

$I_2 = 7,17 \angle -144,92°\,A$

$I_2 = -I_2'$

$I_2 = -7,17 \angle -144,92°\,A =$
$I_2 = 7,17 \angle -144,92° + 180°\,A =$

$\boxed{I_2 = 7,17 \angle 35,08°\,A}$

4º) $I_1 \rightarrow \overset{+}{-} V_I = (5\angle -18°) \cdot (j2) = 10\angle 72° V$

$I_2 \rightarrow \overset{+}{-} V_{II} = (2\angle 90°) \cdot (2) = 4\angle 90° V$

$Z_1 = j3,8\Omega + 1\Omega \,//\, -j4\Omega = 15,41\angle -3,43°\Omega$

$Z_{eq} = Z_1 + j2\Omega + 2\Omega = 17,41\angle 3,54°\Omega$

$$I = \frac{V_1 + V_2}{Z_{eq}} = 0,69\angle 50,79° A$$

$V_2 = V_2 - I \cdot 2\Omega = 3,19\angle -13,03° V$

$$I_B = \frac{-j4}{(j3,8 + 1 - j4)} \cdot I \rightarrow I_B = 2,70\angle -27,10° A$$