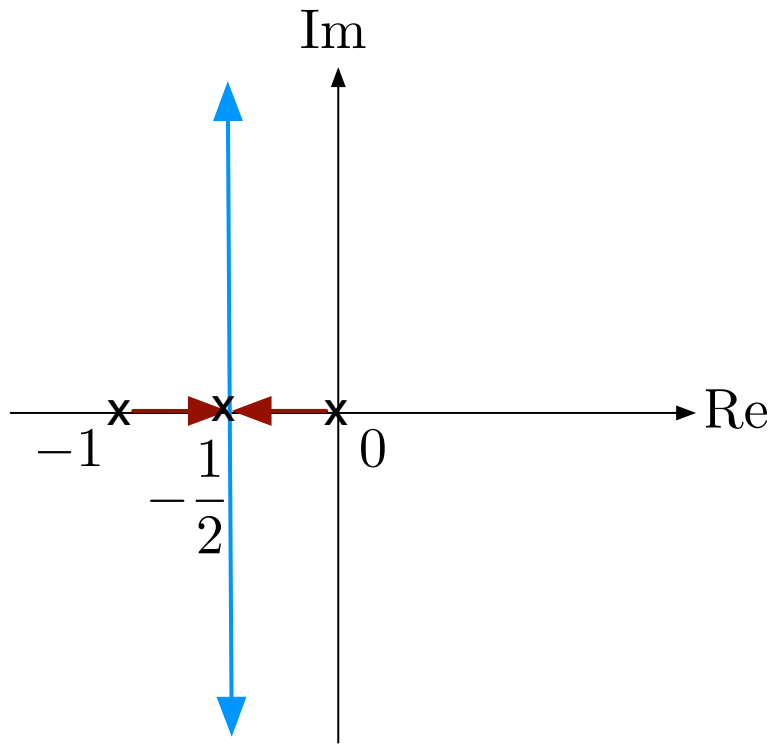
Example, continued

Root locus: $\left\{ -\frac{1}{2} \pm \frac{\sqrt{1-4K}}{2} \;\; : 0 \le K < \infty \right\} \subset \mathbb{C}$

- as K increases from 0, the poles start to move

  $K > 1/4 \qquad \Longrightarrow$ 2 complex roots with $\mathrm{Re}(s) = -1/2$



($s = -1/2$ is the *point of breakaway* from the real axis)