First of all, multiply both the numerator and denominator by K2 – 6K + 1.

Then the first term in the numerator becomes:

* √((K2 + 2K + 1)2 – (K2 – 6K +1)2)
* √ (K4 + 4K3 + 6K2 +4K + 1 – (K4 – 12K3 + 38K2 – 12K +1))
* √ (16K3 -32K2 +16K)
* 4 √K (K-1)

The second term in the numerator becomes:

* (K2 – 6K +1) √ (((K+1)2 - (K-1)2 )/(K-1)2)
* (K2 – 6K +1) √ ( 4K/(K-1)2)
* 2 √K (K2 – 6K +1) / (K-1)

The combined numerator as stated is then:

* 4 √K (K-1) + 2 √K (K2 – 6K +1) / (K-1)
* 2 √K (2K2 – 4K + 2 + K2 – 6K + 1) / (K-1)
* 2 √K (3K2 – 10K + 3) / (K-1)

The denominator becomes:

* (K2 – 6K + 1 – K2 -2K -1)
* 8K

Making the whole expression:

* -(3K2 – 10K + 3) / (4 (K-1) √K)

Though if the first term is negated, the numerator becomes

* -4 √K (K-1) - 2 √K (K2 – 6K +1) / (K-1)
* -2 √K (2K2 – 4K + 2 - K2 + 6K - 1) / (K-1)
* -2 √K (K2 + 2K +1) / (K-1)
* -2 √K (K+1)2 / (K-1)

And the whole expression is

* -2 √K (K+1)2 / (K-1) 8K
* (K+1)2 / 4 (K-1) √K