

mismatched
bases

forward read

A	C	T	G	A	C	T	G	A	C
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T	G	A	C	A	G	A	C	G	T
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reverse read

resulting merged read

A	C	T	G	A	C	T	G	A	C	G	T
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matched bases make
higher resulting quality

use base with higher quality
and decrease resulting quality