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1993 Q23

23. Five runners, P, Q, R, S, T, have a race, and P beats Q, P beats R, Q beats S, and T finishes after P and before Q. Who could NOT have finished third in the race?

(A) P and Q (B) P and R (C) P and S
(D) P and T (E) P, S and T

23. (C) Since P, T and Q must finish in front of S, S cannot be third. Since P is the winner, P cannot be third. Thus the only possible orders are $PRTQS$, $PTRQS$, $PTQRS$ and $PTQSR$, which show that anyone except P and S could finish third.

OR

Since $PTQS$ must finish in that order and R can finish anyplace except ahead of P, it follows that the only possible orders are $PRTQS$, $PTRQS$, $PTQRS$, $PTQSR$. Thus T, R and Q might have finished third, but P and S could not have finished third.