You are given three amplifiers, A, B and C, to connect in cascade between a 10-mV, 100-kΩ source and a 50-Ω load. The amplifiers have voltage gains, input resistances, and output resistances as given below.

amp	R_i	A	R_o
A	10 kΩ	100	10 kΩ
B	100 kΩ	1	10 Ω
C	500 kΩ	5	1 kΩ

Which arrangement of of the three amplifiers gives the best result (highest output voltage)? What is the gain for the best result? (Express the gain in both absolute values and decibels.)

Note: You can take the hard-nosed approach and calculate all possible combination. Or you can use your knowledge of amplifiers to determine the best configuration based on the relative values, and then write a couple of lines explaining how you cam to your conclusion.

A_T (max) = _____