Figure 8.12 shows that two vortices, separated by distance b, and with equal but oppositely signed circulation Γ, induce respective winds V that result in a forward translation of the two-vortex system. This is given by

$$V = \Gamma/(2\pi b), \qquad (1)$$

which also can be used to determine the vortex-induced winds at the rear-inflow center line. To do this, recall that circulation is equivalent to the mean vorticity $\overline{\zeta}$ over some area A. Assume that A is based on a circular vortex with a 7-km radius (following Weisman 1993), and then use Eq. (1) to compute V given values of $\overline{\zeta}$ = 0.005 s^{-1}, 0.01 s^{-1} and 0.015 s^{-1}, with b = 10 km, 20 km, and 30 km (half the line-end vortex separation distance). Compare your results with those shown in Fig. 22 of Weisman (1993) (who used a more involved approach; see his Appendix). Discuss the implications both of larger and smaller line-end vortices on the vortex-induced rear-inflow winds, and speculate on the controls of the line-end vortex size.