2-12. A 2 kg disc A collides with a 4 kg disc B with initial velocities $(v_A)_1 \sim N(\mu_{A1}, \sigma_{A1}^2) = N(5, 0.5^2)$ m/s and $(v_B)_1 \sim N(\mu_{B1}, \sigma_{B1}^2) = N(10, 1^2)$ m/s. If the two discs are smooth and the coefficient of restitution is $e = 0.8$, determine the x component of the final velocity of each disk just after collision.

Solutions: $(v_{Ax})_2 \sim N(-6.87, 0.61^2)$ m/s and $(v_{Bx})_2 \sim N(0.59, 0.81^2)$ m/s.