MASSACHUSETTS INSTITUTE OF TECHNOLOGY Department of Electrical Engineering & Computer Science 6.041/6.431: Probabilistic Systems Analysis (Spring 2006)

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1.
$$E[AB] = E[(W+X)(X+Y)] = E[WX + X^2 + XY + WY] = E[X^2] = var(X) + E[X]^2 = 1$$

$$E[AC] = E[(W+X)(Y+Z)] = E[WY+XY+XZ+WZ] = 0$$

- 2. Solution is in the text, pp. 264–265.
- 3. Solution is in the text, pp. 267–268.