3. The continuous random variable X has a density given by

$$f(x) = (3/2)\, x^2 \quad \text{for } -1 \le x \le 1$$

a. Find the CDF of X along with its support. Check in detail that it is a CDF.

b. Let Y = 1-X. Find the support of Y, the CDF and the PDF of Y. Draw the density of Y.

c. Y is a function of X. Compute E[Y] and VAR[Y] in the quickest possible way.

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