STATISTICS APPLIED TO BUSINESS ADMINISTRATION. ACADEMIC YEAR 2015-2016 PRACTICAL EXERCISE 3 (20 MINUTES)

Date: _____

Complete name:_____ ID number:_____

EXERCISE 1 (4 POINTS)

Let X be a r.v. with characteristic function given by $\psi_x(u) = (1 - 2iu)^{-5}$

1. **(2 points)** Compute the mean and the variance of the r.v. X.

2. **(2 points)** What is the value of $P(-2 < X < 4.87)$?

EXERCISE 2 (6 POINTS)

Let X, Y and W be three r.v. such that: $X \in \chi_{15}^2$, $Y \in t_{10}$ and $W \in \mathcal{F}_{10,12}$.

1. **(2 points)** Compute $P(7.26 \leq X \leq 22.3)$.

2. **(2 points)** Compute $P(-2.23 \leq Y \leq 0.70)$.

3. **(2 points)** Find the value of k such that $P(W > k) = 0.90$.