**Statistical mathematics - Assignment 6**

1. a)

b)

c)

* There is a moderate positive correlation; old ages have a tendency to have high glucose level.

1. a) P(X < 40) = P(Z < (40 - 30)/4) = P(Z < 2.5) = 0.5 + P(0 < Z < 2.5) = 0.5 + 0.4938 = 0.9938

b) P(X > 21) = P(Z > (21 - 30)/4) = P (Z > -2.25) = 0.5 + P(-2.25 < Z < 0) = 0.5 + P (0 < Z < 2.25) = 0.5 + 0.4878 = 0.9878

c) P(30 < X < 35) = P((30 - 30)/4 < Z < (35 - 30)/4) = P(0 < Z < 1.25) = 0.3944

1. µ = 50, σ = 15

P(50 < X < 70) = P((50-50)/15 < X < (70-50)/15) = P(0 < Z < 1.33) = 0.4082

1. a)

b)

c) The probabilistic expected value of the game is infinite, meaning any cost would be acceptable to play the game.

d)