Income = $50,000

Utility function given by

U = 5sqrt(I)

15% chance of becoming ill

Cost of illness = $22,500

Find: Loaning cost, pure premium, and maximum premium

Graph u vs x:

U |

|

|\_ \_ \_ \_ \_

X

E(I) = .15(27,500) + .85(50,000) = 46625

E(I) = (% of illness)(Income – cost of illness) + (1 - % of illness)(income)

E(U) = .15(829) + .85(1118) = 1075

5sqrt(27500) = 829

5sqrt(50000) = 1118