a)

From central Limit Theorem P(x<140)=P($\frac{x-144}{16}$<$\frac{140-144}{16}$)= P($\frac{x-144}{16}$<-0.25) is equivalent to F(z<-0.25) where z~$N(0,1)$

From table F(-0.25)=0.4013

Ans 0.4013

b)

From central Limit Theorem P(x>156)=P($\frac{x-144}{16}$>$\frac{156-144}{16}$)= P($\frac{x-144}{16}$>0.75) is equivalent to F(z>0.75) where z~$N(0,1)$

F(z>0.75)=1- F(z<0.75)=1-.7734=0.2266

Ans 0.2266