1. If $U = \{a,b,c,d,e,f,g,h,i,j,k,l,m,n\}$, $A = \{a,c,e,g,\}$ and $B = \{c,g,i,j,k,l\}$, find the set $(A \cap B')'$. *(7 points)*

2. List all the subsets of the set $A = \{a,b,c,d\}$. *(6 points)*

3. A survey was conducted to examine patterns in owning microwaves ovens, answering machines and VCRs. The following data were obtained: 21 people had microwaves; 39 people had VCRs; 7 people had none of the three; 8 people had answering machines, but no microwaves or VCRs; 6 people had microwaves and VCRs, but no answering machines; 25 people had answering machines; 10 people had all three; 15 people had answering machines and VCRs.

   Draw a Venn diagram using the above information. Then determine how many people were in the survey. *(7 points)*