In control replication, cells are replicated over a period of two days. Not until mitosis is completed, can freshly-synthesized DNA be replicated again. Two contro mechanisms have been identified—one positive and one negative. Suppose that a replication is observed in three cells. Let A denote the event that all cells are identified as positive and let B denote the event that all cells are negative Describe the sample space graphically and display each o the following events:

(a) A (b) B

(c) $A \cap B$ (d) $A \cup B$

2-25. Let P denote being positive and let N denote being negative. The sample space is $\{PPP, PPN, PNP, NPP, PNN, NPN, NNP, NNN\}$.

(a) $A = \{PPP\}$

(b) $B = \{NNN\}$

(c) $A \cap B = \varnothing$

(d) $A \cup B = \{PPP, NNN\}$

2-37. Samples of a cast aluminum part are classified on th basis of surface finish (in microinches) and edge finish. Th results of 100 parts are summarized as follows:

		edge finish	
		excellent	good
surface	excellent	80	2
finish	good	10	8

(a) Let A denote the event that a sample has excellent surfac finish, and let B denote the event that a sample has exce lent edge finish. Determine the number of samples i $A' \cap B$, B', and $A \cup B$.

(b) Assume that each of two samples is to be classified on th basis of surface finish, either excellent or good, edge finisl either excellent or good. Use a tree diagram to represent th possible outcomes of this experiment.

2-27. (a) $A' \cap B = 10$, $B' = 10$,

$A \cup B = 92$