

HW #2: CSE160 - 2

2.49. * $N/2$ slot times is required to decide as to who would transmit next, the $N/2$ slots are wasted as there is no transmission during this period

* 5 slots

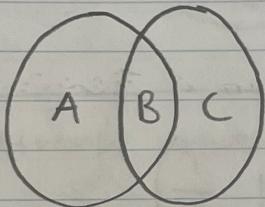
$$F(n) = \frac{5}{(n/2 + 5)}$$

* $N/2$ is the time wasted in deciding the next sender

* 5 is the slot time of each packet sent by a station

$$\frac{N}{2} + 5 \cdot \frac{1}{2} \Rightarrow f(n) = \frac{N}{2} + \frac{10}{2} \Rightarrow f(n) = \frac{n+10}{2}$$

2.51.-



* hidden node problem where in A interferes with the communication of C and C again disturbs the communication of A with B

- Both node A and C are placed within the range of node B but node A and B are not within the transmission range
- Now both node A and C like to interact with the node B; therefore both start sending the frame to the node B
- Node A and C are not known about each other as their signal can't carry that far
- The collision will happen on the node B but node A and C will not know about this collision

	Node A	Node B	Node C	Node D	Node E	Node F
A-	A : E	A : A	A : E	A : C	A : C	
B : C	B -	B : E	B : E	B : B	B : C	
C : C	C : E	C : -	C : E	C : C	C : C	
D : C	D : E	D : E	D : -	D : D	D : C	
E : C	E : E	E : E	E : E	E : -	E : C	
F : C	F : E	F : E	F : E	F : C	F : -	