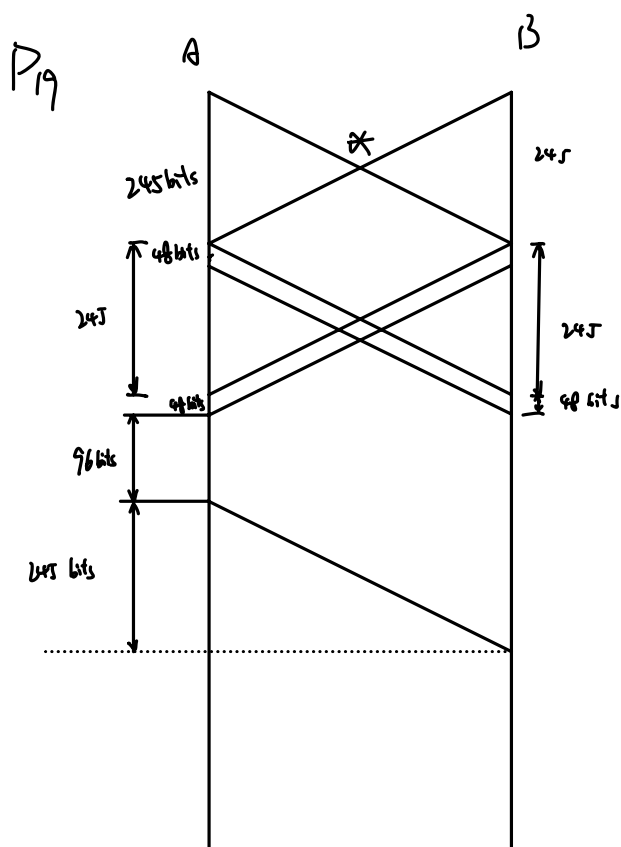


P8 $T_p = 325 \text{ bits} / 10 \text{ Mbps} = 0.0000325 \text{ seconds}$

A can finish transmitting before it detects that B has transmitted, if A transmit a packet less than 649 bits.

In worst case, B's signal reach A after 2.0000649 seconds
A may make mistake that sended frame will not meet collision



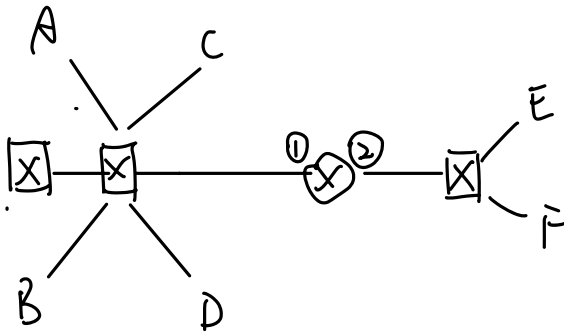
$$k_A = 0 \quad 2^0 - 1 = 0 \quad \text{on } 0$$

$$k_B = 1 \quad 2^1 - 1 = 1 \quad \text{on } 1$$

B will schedule its retransmission after 901 bits times

- A start transmit after 634 bits times.
- After 879 bits times, A's signal reach B
- B will refrain from transmitting at its scheduled time

P22



A → switch

source MAC

A's MAC addr

dest MAC

router's MAC addr ①

source IP

A's IP

dest IP

router's IP ①

switch → router

source MAC

A's MAC addr

dest MAC

router's MAC ①

source IP

A's IP

dest IP

router's IP ①

router → F

source MAC

router's MAC addr ②

dest MAC

F's MAC addr

source IP

router's IP addr ②

dest IP

F's IP addr

P23

$$11 \times 1 \text{ Gbps} = 11 \text{ Gbps}$$

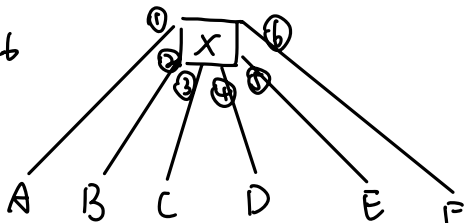
P24

$$J \times 1 \text{ Gbps} = J \text{ Gbps}$$

P25

$$1 \text{ Gbps}$$

P26



event	MAC		ports	
B → E	B	②	flooding	A C D E
E → B	E	⑤	forwarding	B
A → B	A	①	forwarding	B
B → A	X	X	forwarding	A

Q #5 (a) Different access point will have different MAC address and SSID. They use same channel, 11, thus, they will receive same frame from node. However, if Destination MAC is different, AP will drop the frame. Thus they can work in parallel. However, they will have collision, due to they use same bandwidth. The total transmission rate is 11 Mbps.

(b) They use different bandwidth, no collision will happen. The total transmission rate is 22 Mbps.