L1

$a_n = \frac{2}{T} \int_0^T f(t) sin(2\pi n f t) dt$

$b_n = \frac{2}{T} \int_0^T f(t) cos(2\pi n f t) dt$

$c_n = \frac{2}{T} \int_0^T f(t) dt$

$2BlogV$

$Blog(1 + \frac{S}{N})$

L2

Use?

- Framing
- Error control
- Flow control

Possible Services Offered

Unacknowledged connectionless service.

Acknowledged connectionless service.

Acknowledged connection-oriented service.

Framing Methods

1. Byte count
2. Byte stuffing
3. Bit stuffing
4. coding violation

Error control

1. Positive or negative acknowledgement
2. Sequence number
3. Timer
4. Error control code

Flow control

1. Feedback-based
2. Rate-based

Error correction

1. Hamming code
2. Binary convolutional code
3. Reed-Solomon code
4. LDOC code

Error&Flow control

1. Stop and wait

Sliding window protocal:

2. Go back N
3. Selective-Repeat

L3

Services Provided to the Transport Layer

1. Service independent of router technology
2. RIght connection to end-terminal(?
3. Network address accross LANs and WANs

Count-to-infinity problem

Good news slow but bad news fast. So the hop count will increase to infinity.

Broadcast approach

1. Just send
2. Multidimension routing
3. Flooding
4. Reverse path forwarding

Bufferbloat

Buffer is too large cause unncessesary queueing.

Traffic Management

1. Network provisioning
2. Traffic-aware routing
3. Admission control
4. Traffic throttling(Active Queue Management)
5. Load shedding