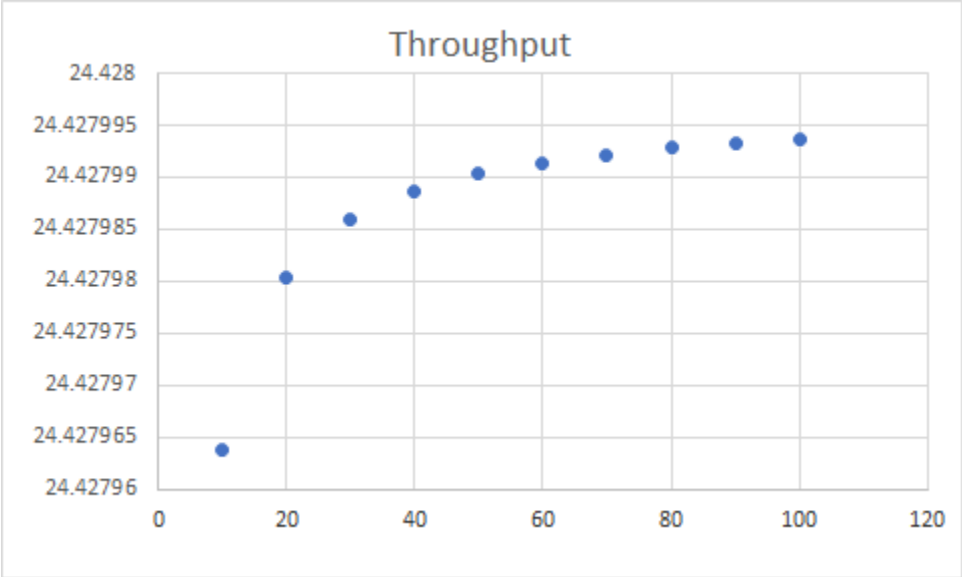
Keeping these values along with all other factors specified above to be constant, if we change the link speed of link 2, with an initial value of 100mbps and step size of 10mbps and the final value of 10 Mbps, how do the following characteristics change? (Please plot necessary graphs)

1. The average delay incurred by link 2.

Linkspeed2	Delay
100	51.45263158
90	57.1748
80	64.32631579
70	73.51578947
60	85.75789474
50	102.9052632
40	128.6421053
30	171.5157895
20	257.2736842
10	514.5578947

2. The average throughput is achieved by link 2.

Linkspeed2	Throughput
100	24.42799362
90	24.42799326
80	24.42799279
70	24.4279922
60	24.42799141
50	24.4279903
40	24.42798864
30	24.42798587
20	24.42798034
10	24.42796372



3. Packet loss (error + collision) rate exhibited by link 2.

Linkspeed2	Packet loss(error+collision)
100	0
90	0
80	0
70	0
60	0
50	0
40	0
30	0
20	0
10	0

4. What is the average delay per packet incurred by the link layer in Router 3? Is it identical to the corresponding value in Router 4?

Linkspeed2	Delay(R3)	Delay(R4)
100	83.58426966	83.99435028
90	86.63483146	87.05649718
80	90.4494382	90.88700565
70	95.34831461	95.80225989
60	101.8932584	102.3672316
50	111.045	111.611
40	124.77	125.404
30	147.662	148.393
20	193.432	194.371
10	330.745	332.306

SIZE 4

a)

in data link layer	protocols
WIRED_NODE_1	Ethernet
WIRED_NODE_2	Ethernet
WIRED_NODE_3	Ethernet
WIRED_NODE_4	Ethernet
ROUTER_5	Ethernet and point to point
ROUTER_6	Ethernet and point to point

b) c)

	Packet_transmitted	Packet_transmitted	Packet_errored	Packet_errored	Packet_collided	Packet_collided
	Data	Control	Data	Control	Data	Control
	228	287	0	0	0	0
1	38	44	0	0	0	0
2	76	111	0	0	0	0
3	38	44	0	0	0	0
4	38	44	0	0	0	0
5	38	44		Chart Area 0	0	0

d)

Overhead_transmitted(bytes)	fraction	percentage
29892	0.082399	8.2398862
5428	0.089118	8.9118014
8180	0.068659	6.8658721
5428	0.089118	8.9118014
5428	0.089118	8.9118014
5428	0.089118	8.9118014

e)

Application Id	Throughput (Mbps)
1	0.006164
2	0.006164
3	0.006164
4	0.006164

SIZE 8

a)

in data link layer	protocols
WIRED_NODE_1	Ethernet
WIRED_NODE_2	Ethernet
WIRED_NODE_3	Ethernet
WIRED_NODE_4	Ethernet
ROUTER_5	Ethernet and point to point
ROUTER_6	Ethernet and point to point

b) c)

	Packet_transmitted	Packet_transmitted	Packet_errored	Packet_errored	Packet_collided	Packet_collided
	Data	Control	Data	Control	Data	Control
	418	507	0	0	0	0
1	114	132	0	0	0	0
2	114	155	0	0	0	0
3	38	44	0	0	0	0
4	76	88	0	0	0	0
5	76	88	0	0	0	0

d)

Overhead_transmitted(bytes)	fraction	percentage
54900	0.082534	8.2534051
16284	0.089118	8.9118014
11476	0.064502	6.4502349
5428	0.089118	8.9118014
10856	0.089118	8.9118014
10856	0.089118	8.9118014

e)

Application Id	Throughput (Mbps)
1	0.006164
2	0.006164
3	0.006164
4	0.006164
5	0.006164
6	0.006164
7	0.006164
8	0.006164

SIZE 12

A)

in data link layer	protocols
WIRED_NODE_1	Ethernet
WIRED_NODE_2	Ethernet
WIRED_NODE_3	Ethernet
WIRED_NODE_4	Ethernet
ROUTER_5	Ethernet and point to point
ROUTER_6	Ethernet and point to point

B)

	Packet_transmitted	Packet_transmitted	Packet_errored	Packet_errored	Packet_collided	Packet_collided
	Data	Control	Data	Control	Data	Control
	608	727	0	0	0	0
1	114	132	0	0	0	0
2	152	199	0	0	0	0
3	114	132	0	0	0	0
4	114	132	0	0	0	0
5	114	132	0	0	0	0

c)

d)

Overhead_transmitted(bytes)	fraction	percentage
79908	0.082585	8.2584736
16284	0.089118	8.9118014
14772	0.06241	6.2410221
16284	0.089118	8.9118014
16284	0.089118	8.9118014
16284	0.089118	8.9118014

e)

Application Id	Throughput (Mbps)
1	0.006164
2	0.006164
3	0.006164
4	0.006164
5	0.006164
6	0.006164
7	0.006164
8	0.006163
9	0.006164
10	0.006164
11	0.006164
12	0.006164