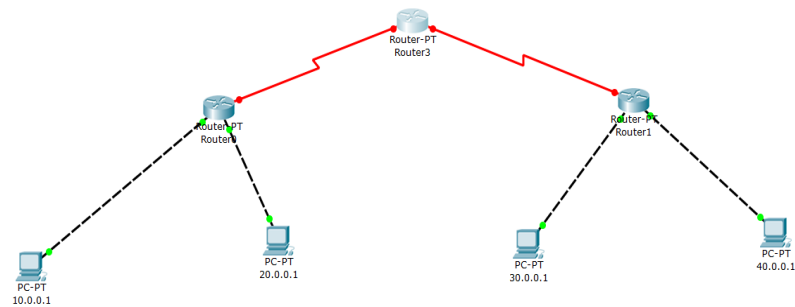


LAB PROGRAM-03

Configure default route, static route to router.



```
10.0.0.1
Physical Config Desktop Custom Interface
Command Prompt
Pinging 20.0.0.1 with 32 bytes of data:

Reply from 20.0.0.1: bytes=32 time=0ms TTL=127
Reply from 20.0.0.1: bytes=32 time=0ms TTL=127
Reply from 20.0.0.1: bytes=32 time=2ms TTL=127
Reply from 20.0.0.1: bytes=32 time=0ms TTL=127

Ping statistics for 20.0.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 2ms, Average = 0ms

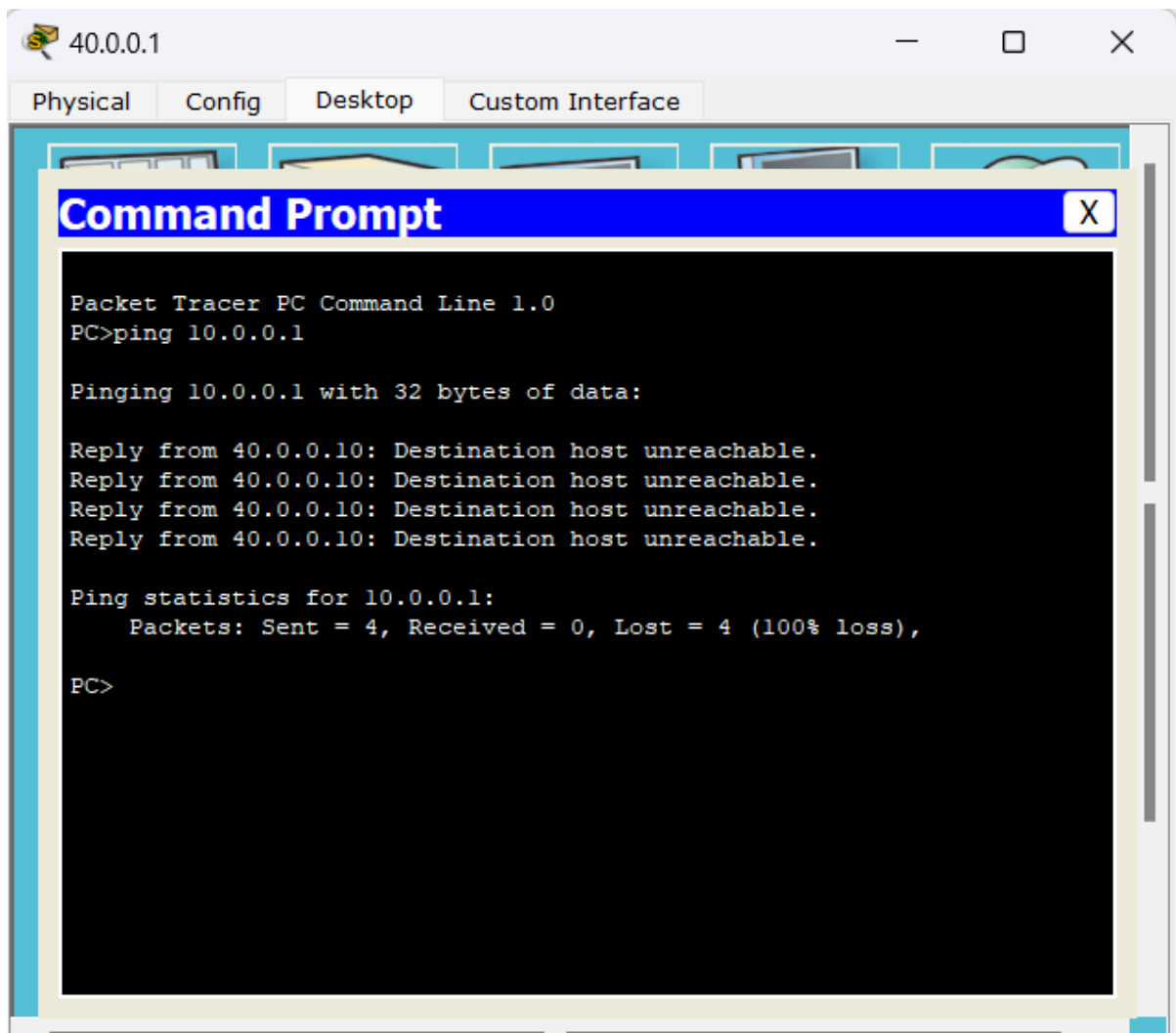
PC>ping 40.0.0.1

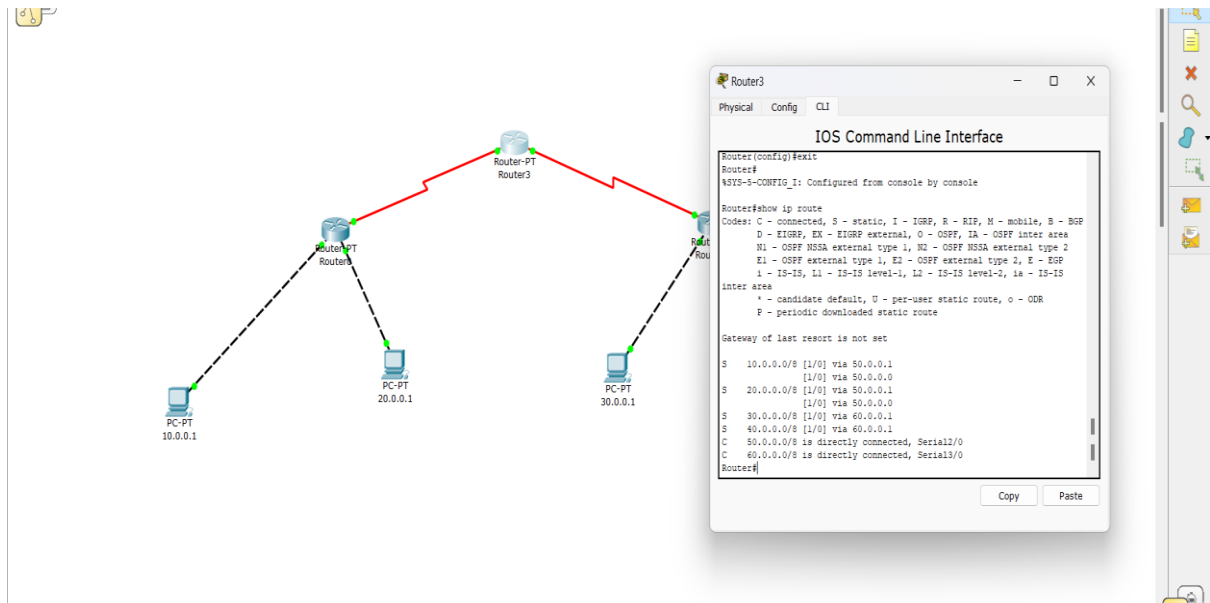
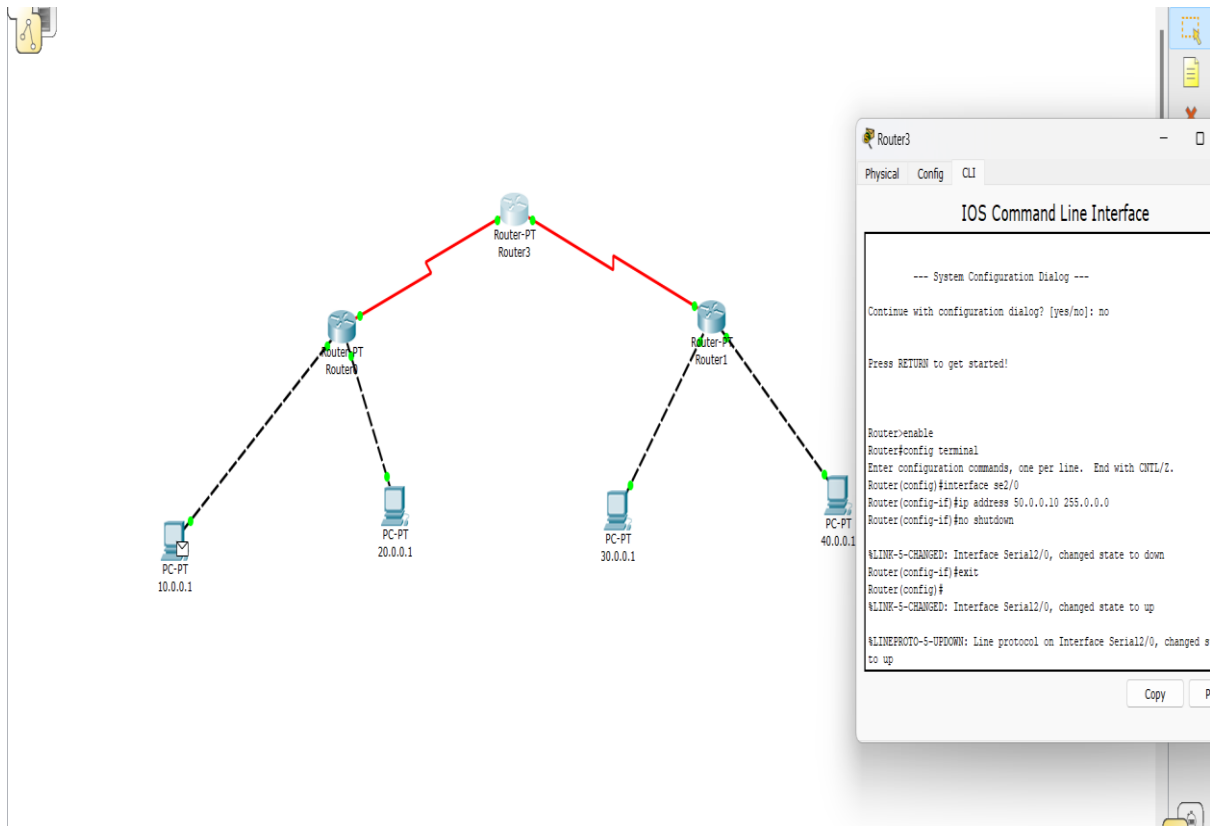
Pinging 40.0.0.1 with 32 bytes of data:

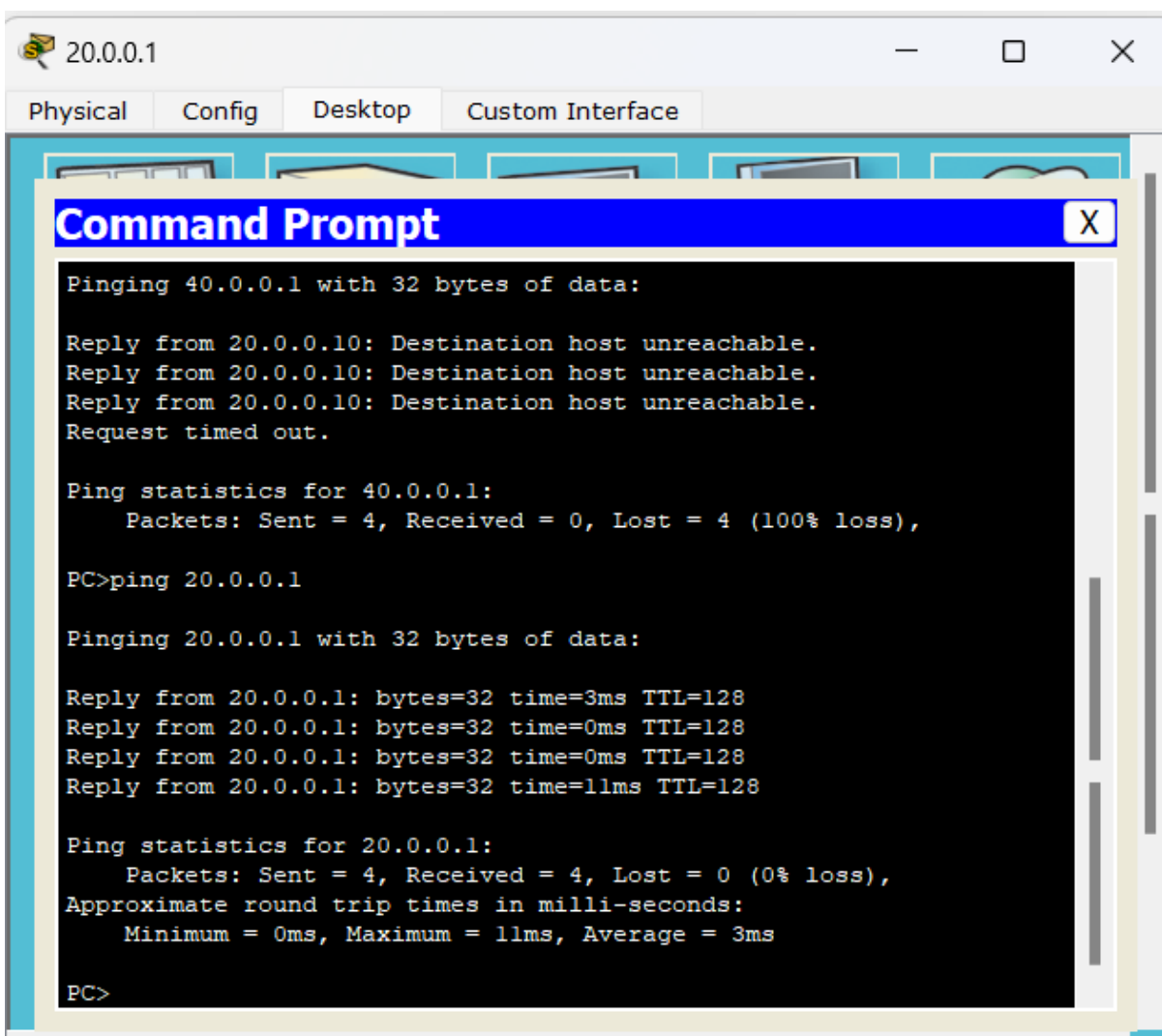
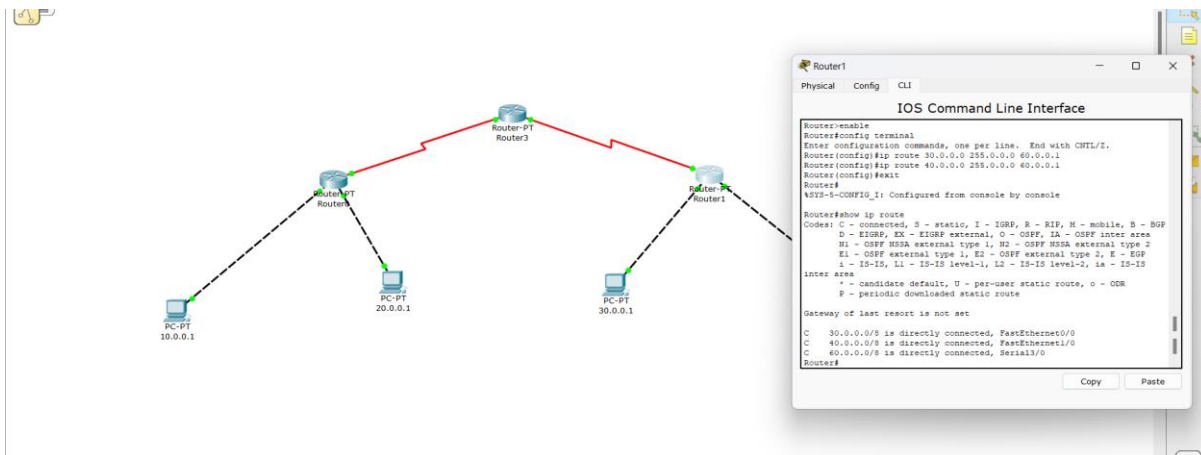
Reply from 10.0.0.10: Destination host unreachable.
Reply from 10.0.0.10: Destination host unreachable.
Reply from 10.0.0.10: Destination host unreachable.
Reply from 10.0.0.10: Destination host unreachable.

Ping statistics for 40.0.0.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

PC>
```







LAB - 03

Configure IP address to routers in Packet Tracer.
Explore the following messages ping responses, destination unreachable, request timed out, reply.

Steps involved:-

Step 1: Drag and drop 2 pc's and a generic router set the IP addresses of 2 pc's as 10.0.0.1 and 20.0.0.1 respectively. Set the gateway of 2 pc's as 10.0.0.3 and 20.0.0.3 respectively and connect them to the router.

Step 2: Configure the router settings to connect the two networks (i.e. two pc's of different n/w) by using following steps after making the connections

Router > enable

Router # config terminal

Router (config) # interface fastEthernet 0/0

Router (config-if) # ip address 10.0.0.3 255.0.0.0

Router (config-if) # no shutdown

Router (config-if) # exit

Router (config) # interface fastEthernet 1/0

Router (config-if) # ip address 20.0.0.3 255.0.0.0

Router (config-if) # no shutdown

Router (config-if) # exit

Router (config) # exit

Router #

PAGE NO. _____
DATE _____

Step 3: Send a simple PDU from PC0 with IP address 10.0.0.1 to PC1 with IP address 50.0.0.1 and confirm how many packets sent by using ping command.

Step 4: Similarly, connect two more PC's with a router and configure by following above mentioned steps. Introduce one more router and connect it to the existing two routers of different network and configure it.

Step 5: Now, if you ping from the PC with IP address 10.0.0.1 as > ping 40.0.0.1 the response will be destination unreachable. Although, it seemed there's a connection b/w these two PC's indirectly via routers, but every router may not have information regarding every network present in the topology so these PC's cannot communicate. To eliminate this, we should use static routing to teach every router manually.

Step 6: We can do static routing for router by the following steps

Router# config t

Router (config)# ip route 10.0.0.0 255.0.0.0 50.0.0.1

Router (config)# ip route 20.0.0.0 255.0.0.0 50.0.0.1

Router (config)# ip route 30.0.0.0 255.0.0.0 60.0.0.1

Router (config)# ip route 40.0.0.0 255.0.0.0 60.0.0.1

Router (config)# exit

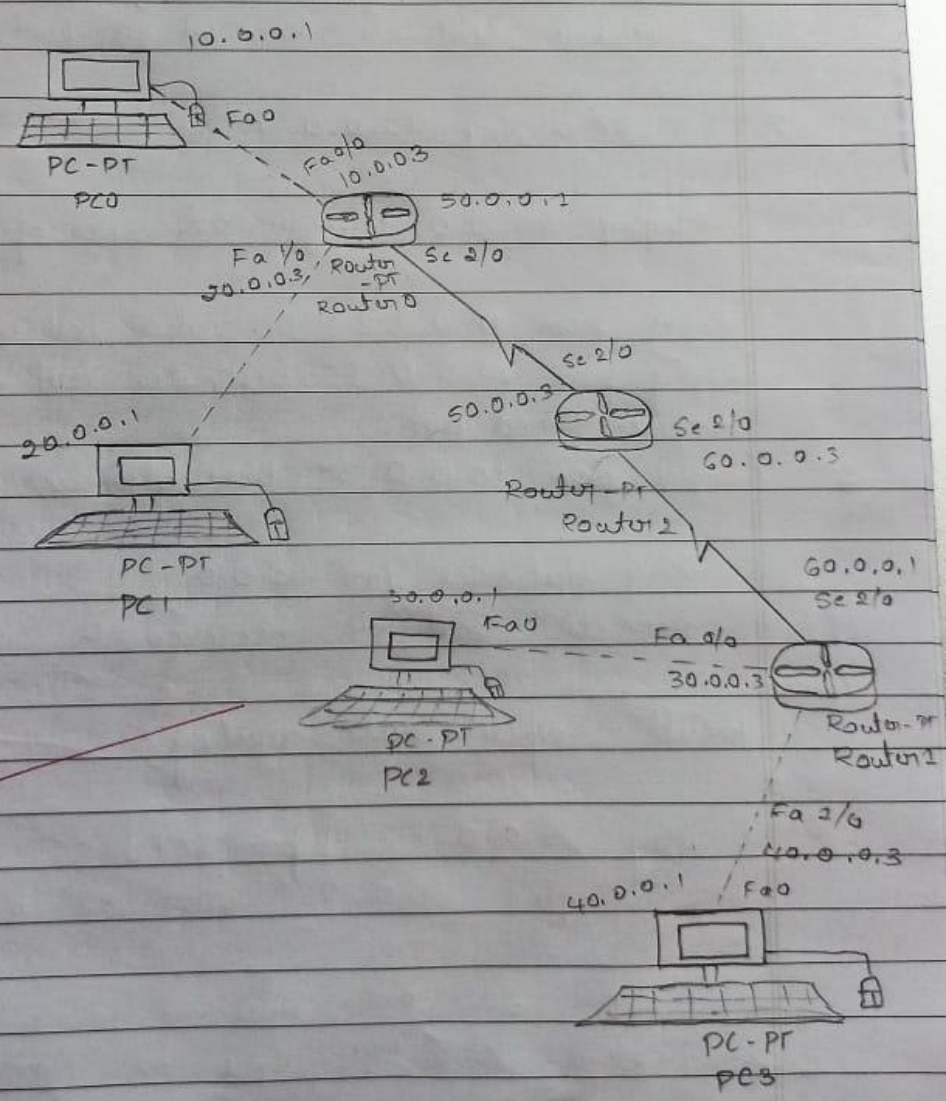
Router#

Step 7: We can view all the networks connected to a router as follows:

Router # show ip route

Codes: C - Connected, S - Static

S 10.0.0.0/8 [1/0] via 50.0.0.1
 S 20.0.0.0/8 [1/0] via 50.0.0.1
 S 30.0.0.0/8 [1/0] via 60.0.0.1
 S 40.0.0.0/8 [1/0] via 60.0.0.1
 C 50.0.0.0/8 is directly connected, Serial 12/0
 C 60.0.0.0/8 is directly connected, Serial 13/0



Command prompt :-

PC > ping 20.0.0.1

Pinging 20.0.0.1 with 32 bytes of data:

Request timed out.

Reply from 20.0.0.1 : bytes = 32 time = 0ms TTL = 127

Reply from 20.0.0.1 : bytes = 32 time = 0ms TTL = 127

Reply from 20.0.0.1 : bytes = 32 time = 0ms TTL = 127

Ping statistics for 20.0.0.1

Packets : sent = 4, Received = 3, Lost = 1 (25% loss)

2. PC > ping 40.0.0.1

Pinging 40.0.0.1 with 32 bytes of data:

Reply from 10.0.0.3 : Destination host unreachable.

Reply from 10.0.0.3 : Destination host unreachable.

Request timed out.

Reply from 10.0.0.3 : Destination host unreachable.

Ping statistics for 40.0.0.1

Packets : Sent = 4, Received = 0, Lost = 4 (100% loss)

Result :- After Static routing

1. Ping 20.0.0.1 [from PC1]

Pinging 20.0.0.1 with 32 bytes of data:

Reply from 20.0.0.1 bytes = 32 time = 0ms TTL = 127

Reply from 20.0.0.1 bytes = 32 time = 0ms TTL = 127

Reply from 20.0.0.1 bytes = 32 time = 0ms TTL = 127

Reply from 20.0.0.1 bytes = 32 time = 0ms TTL = 127

Reply from 90.0.0.1 bytes = 32 time = 0ms TTL = 128

Ping statistics for 90.0.0.1

Packets : sent = 4 , Received = 4 , lost = 0 (0% loss)

Approximate round trip times in milli-seconds

Minimum = 0ms , Maximum = 1ms , Average = 0ms

S.P.T
30/6/23