Packet 1

```
Ethernet II, Src: ca:00:69:a9:3c:03, Dst: ca:08:c7:30:a0:09
Internet Protocol Version 4, Src: 10.10.53.4, Dst: 10.31.33.3
Internet Protocol Version 4, Src: 192.23.55.8, Dst: 192.17.73.5
Internet Control Message Protocol
   Type: 8 (Echo (ping) request)
   Code: 0
```

Considering the above captured (partial) packet and assuming that each IP address identifies a different device, answer True or False to the following sentences:

This packet depicts data communication through an IPv4 over IPv4 tunnel. T

This packet depicts data communication through a tunnel, this same tunnel does not allow IPv6 data communication. F

A router receiving this packet will route the packet towards the address 10.31.33.3. T

This packet depicts data communication through a tunnel established between end-points with addresses 192.23.55.8 and 192.17.73.5. F

```
Status codes: s suppressed, d damped, h history, * valid, > best, i - internal,
              r RIB-failure, S Stale, m multipath, b backup-path, x best-external, f RT-Filter
Origin codes: i - IGP, e - EGP, ? - incomplete
```

OSPF, RIP...

	Network	Next Hop	Metric	LocPrf	Weight	Path
*>	191.47.82.0	0.0.0.0	0		32768	i
*>i	193.28.69.0	200.2.33.3	0	100	0	2007 2002 i
*		204.25.83.7	0	100	0	2006 2001 2005 2002 i
*>i	202.27.64.0	200.2.33.3	0	100	0	2007 2001 2002 i
*>i	203.43.17.0	200.2.33.3	0	100	0	2007 2005 i
*		208.29.42.7	0	100	0	2008 2001 2007 2005 i
*>i	207.4.68.0	200.2.33.3	0		32768	i

ULTIMO

PRIMEIRO

iBGP

Considering the previous BGP route announcements table in an ASBR router, that is not running any IGP routing protocol, answer True or False to the following sentences:

"Router de Fronteira"

The network with prefix 193.28.69.0/24 is located in AS number 2002. T

The BGP route announcement of network with prefix 203.43.17.0/24 via the next-hop 208.29.42.7 was received from a neighbor from a different AS using an external BGP relation. ?

From all BGP route announcements received, this router placed five networks routes on the IPv4 routing table. T

A BGP route announcement of network with prefix 193.28.69.0/24 was received from the neighbor AS with number 2002. F

2007

3. Regra prática para distinguir eBGP de iBGP:

- Se o "leftmost" do AS_PATH for igual ao teu AS local, então foi iBGP (porque o vizinho está no mesmo AS).
- Se for diferente, é eBGP.

Estabelecem a primeira comunicação

Packet 1

```
Internet Protocol Version 4, Src: 192.31.19.1, Dst : 192.31.19.3
Transmission Control Protocol, Src Port: 29296, Dst Port: 179, Seq: 1, Ack:1, Len: 53
Border Gateway Protocol - OPEN Message
   Marker: ffffffffffffffffffffffffffffffff
   Length: 53
   Type: OPEN Message (1)
   Version: 4
   My AS: 2001
   Hold Time: 180
   BGP Identifier: 195.19.40.8
   Optional Parameters Length: 12
   Optional Parameters
      Optional Parameter: Capability
         Parameter Type: Capability (2)
         Parameter Length: 6
         Capability: Multiprotocol extensions capability
      Optional Parameter: Capability
         Parameter Type: Capability (2)
         Parameter Length: 6
         Capability: Support for 4-octet AS number capability
      ...
```

Packet 2

```
Internet Protocol Version 4, Src: 192.31.19.1, Dst : 192.31.19.3
Transmission Control Protocol, Src Port: 29296, Dst Port: 179, Seq: 92, Ack:92, Len: 253
Border Gateway Protocol - UPDATE Message
   Marker: ffffffffffffffffffffffffffffffff
   Length: 61
   Type: UPDATE Message (2)
   Withdrawn Routes Length: 0
   Total Path Attribute Length: 34
   Path attributes
      Path Attribute - ORIGIN: IGP
      Path Attribute - AS_PATH: 2001 2007
      Path Attribute - NEXT_HOP: 192.31.19.1
      Path Attribute - MULTI_EXIT_DISC: 0
   Network Layer Reachability Information (NLRI)
      192.17.20.0/24
   ...
```

Considering the above captured (partial) packets from the same BGP peering relation, answer True or False to the following sentences:

The network 192.17.20.0/24 belongs to Autonomous System number 2007. ⬍

Network 192.17.20.0/24 is not a BGP aggregate of multiple networks. ⬍

These packets are part of an internal BGP peering relation. ⬍

Network 192.17.20.0/24 was added to the BGP process by a redistribution mechanism from other routing protocol. ⬍