How does the Internet Work?

### The answer to all the questions can be found in the listed videos. I suggest reading through all the questions first so that you know what answers you’re looking for, then watching videos that sound like they will answer the question you’re trying to answer. **Answers must be in complete sentences to receive credit.**

Internet Infrastructure as Fast as Possible - <https://youtu.be/n71TUnTNdw8>

DNS as Fast as Possible - <https://youtu.be/Rck3BALhI5c>

Internet vs Web as Fast as Possible - <https://youtu.be/laepk9KrAZY>

Internet Protocol - IPv4 vs IPv6 as Fast as Possible - <https://youtu.be/aor29pGhlFE>

Routers vs. Switches vs. Access Points - And More - <https://youtu.be/Vc16CCAAz7Q>

What is TCP/IP? - <https://youtu.be/PpsEaqJV_A0>

HTML5 as Fast as Possible - <https://youtu.be/IsXEVQRaTX8>

Bits vs Bytes as Fast as Possible - <https://youtu.be/Dnd28lQHquU>

How Do URLs Work? - <https://youtu.be/OvF_pnJ6zrY>

# Questions:

1. What is the difference between bits and bytes and what are they used for?

Their size is different but they are both used to measure amounts of data.

1. Why is HTML5 the new standard?

It is easier to embed things.

1. What is the difference between the Internet and the Web?

The internet is a giant network for all other networks; the web is a way to access these networks.

1. What is the role of an ISP?

They make a way for you to access the internet. (Internet service provider)

1. What is a modem?

A modem is a piece of hardware that transforms data (modulates) to be transferred.

1. What is a browser?

A browser is a GUI program to display an HTML file.

1. What is the difference between guided and unguided media?

Guided media has a path or route through a cable whereas unguided media is spread out around itself in all directions.

1. Summarize how the internet was developed.

ARPANET wanted to be able to transfer packets between computer so they developed the internet.

1. What is a web server and what purpose does it serve?

A web server uses HTTP to use files to create web pages to respond to input.

1. What is a router and what purpose does it serve?

A router networks data as packets to separate networks for computers.

1. What are packets and what purpose do they serve?

Information and data are stored into the packets which are easier to transfer.

1. What are IP addresses and what purpose do they serve?

An Internet Protocol is a label with numeric values that is assigned to every device that is connected to a network.

1. What is Intranet and what purpose does it serve?

The intranet is an internal internet. This is good because it is faster than using the internet and it is more secure

What is bandwidth?

Bandwidth is the amount of mental capacity or energy that it takes to do something.

1. What is a firewall?

The firewall is designed as part of a network to restrict unauthorized access.

1. What is the “backbone” (Internet backbone service providers) and what purpose does it serve?

The backbone is the defined routes that take data to strategically placed locations; it is used to make the internet faster and more accessible.

1. What is the purpose of a domain name?

It is a way to identify one or more IP addresses in that domain.

1. Match the parts of the URL to its name: http://mrsimonsen.net/web-dev.html

Protocol://Hostname.TLD/ports.File type

1. What is a static IP address?

It is a permanent address to the internet.

1. What is a dynamic IP address?

It is a temporary address for the internet.

1. What is the difference between IPv4 and IPv6?

An Ipv4 is a 32-bit numeric address.

An Ipv6 is a 128-bit address in hexadecimal.

1. What is the function of a DNS?

It translates IP Addresses from domain names so that computers understand. (domain name system)

1. What does HTTP stand for and how is it used?

Hyper Text Transfer Protocol is used for the application of layer in data communication.

1. What does HTTPS stand for and how is it used?

Hyper Text Transfer Protocol Secure is used to communicate data securely.

1. What does FTP stand for and how is it used?

File Transfer Protocol is used to transfer files through the internet

1. What does SMTP stand for and how is it used?

Simple Mail Transfer Protocol is used when delivering email from clients or for emails moving between servers.” It uses port 25” (hmailserver.com)

1. What does TCP/IP stand for and how is it used?

Transmission Control Protocol/Internet Protocol allows computers to communicate to each other through the network. It is a networking standard.