# Worksheet 3 Internet security

**Task 1**

1. Firewalls use ports to determine if traffic using a certain protocol should be allowed through. Complete this table of commonly used network protocols and their port numbers:

|  |  |  |
| --- | --- | --- |
| **Application** | **Protocol** | **Port** |
| File transfer by browser or FTP client | FTP |  |
|  |  | 23 |
|  |  | 25 |
|  |  | 53 |
|  |  | 67 |
| Retrieving email from a server | POP3 |  |
| Secure communication with web server | HTTPS (HTTP over TLS/SSL) |  |
| Game | Call of Duty |  |

1. Open [**http://www.t1shopper.com/tools/port-scan/**](http://www.t1shopper.com/tools/port-scan/) in a web browser. Click on the Check All link and then the Scan Ports button. The website will check which of the listed ports in your LAN’s firewall is open to incoming traffic.

List any open ports below and state why they might be open:

|  |  |  |
| --- | --- | --- |
| **Port** | **Use** | **Reason it is open** |
| *80* | *HTTP* | *School hosts a website* |
|  |  |  |
|  |  |  |
|  |  |  |

If none of these ports are open to incoming traffic, why do you think that might be?

**Task 2**

Select the most appropriate security methods for the given scenarios, explaining the technical reasons for your choices:

|  |  |  |
| --- | --- | --- |
| **Scenario** | **Most appropriate security method(s)** | **Reason** |
| The recipient of an email needs to check that the message contents are unaltered and verify the identity of the sender. |  |  |
| A stock market and a broker exchange financial information securely. Data need to be processed very quickly. |  |  |
| Transactions between an eCommerce website and its customers need to be protected.  |  |  |
| A number of accountants are exchanging financial details about a company. They need to ensure the data is protected but do not work for the same company and have never met. |  |  |

**Task 3**

You are responsible for the network security of a small company with one office. All employees use their own devices in the office.

The owner wants to make new employees aware of the best practices for preventing the intrusion of malicious software into the network.

Write an overview that can be used to educate these new employees. You should explicitly mention:

* Preventing viruses
* Preventing worms