Name: Class:

Task 1

Match the words on the left to the meanings on the right.

|  |  |  |
| --- | --- | --- |
| **Network packet terminology** |  | **Meaning** |
| Header |  | The particular computer or server that the packet is being sent to. |
| Destination address | Used to determine the place of this packet of data in the overall order. |
| Originating address | This is located at the start of the packet and contains the destination address, originating address and packet number. |
| Packet number | Also known as the sender. This is the computer or server that the packet has come from. |
| Payload | This contains information that shows it is the end of the packet. It may also contain data that can be used to check if there is an error in the packet. |
| Trailer | The actual contents of the packet. |

Task 2

The following table shows eight packets of data that are received by a home router.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Destination address** | **Originating address** | **Packet number** | **Payload** | **Trailer** |
| 192.168.1.2 | 192.168.1.1 | 4 | 01001011 | 4 |
| 192.168.1.2 | 192.168.1.1 | 3 | 01100011 | 3 |
| 192.168.1.2 | 192.168.1.1 | 1 | 01010000 | 2 |
| 192.168.1.2 | 192.168.1.1 | 5 | 01000101 | 3 |
| 192.168.1.2 | 192.168.1.1 | 2 | 01000001 | 2 |
| 192.168.1.3 | 192.168.1.1 | 3 | 01011010 | 4 |
| 192.168.1.2 | 192.168.1.1 | 3 | 01000011 | 3 |
| 192.168.1.2 | 192.168.1.1 | 6 | 01010100 | 3 |

(a) The trailer inside each packet contains a checksum. The checksum is calculated by adding the total number of 1s in the payload.

(b) A message has been sent to the computer connected at IP address 192.168.1.2.

The payload in each packet shows one character in ASCII.

Workout each letter, then re-order the packets to work out the word that has been transmitted. Your teacher may give you a copy of an ASCII table to help you, or you can make use of an Internet search to find one online.

Word transmitted: