1. Put the following words into two columns according to whether they are challenges or enabling technologies: Sensors, Integration, Management, Manufacturing, Standards, Energy, Reliability, and Security.

Challenge Enabling Technology

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Modify the following texts so that the statement is true.

Miniaturized sensors have new capabilities.

Open standards are for the success of wireless communications.

1. Here is a series of terms related to IoT. Match each term on the left column to the corresponding definition on the right column.

|  |  |  |
| --- | --- | --- |
| Exaflood |  | Ability of a system or a product to work with other systems or products without any restricted access or implementation |
|  |  |  |
| Interoperatibility |  | Set of documented requirements, specifications, guidelines or characteristics that can be used consistently to ensure that materials, devices, products, processes and services are fit for their purpose. |
|  |  |  |
| Cloud computing |  | Torrent of data collected and exchanged the Internet will have to handle in the very near future |
|  |  |  |
| Standard |  | Model for enabling ubiquitous, convenient, on-demand access to a shared pool of configurable computing resources |

1. Name at least three basic enabling technologies for the future of IoT.

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Are the following statements true or false?

|  |  |  |
| --- | --- | --- |
| True / False |  | We have enough data storage facilities for the Internet of Things |
| True / False |  | One open problem in IoT security that has not been considered in the standards is the distribution of the keys amongst devices |
| True / False |  | Integration of smart devices into the products themselves will not provide significant cost savings |

1. List four basic enabling trends in sensor technology.

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Match a problem shown on the left column to the corresponding solution on the right column.

|  |  |  |
| --- | --- | --- |
| Managing billions or trillions of IoT devices |  | Development and use of light weight management protocols |
|  |  |  |
| Growing complexity of systems |  | System integration, increased efficiency, self-harvesting |
|  |  |  |
| Need for high speed processing of huge amount of data |  | Cloud computing |
|  |  |  |
| Energy limitations |  | New applications and self-configuration systems |