Exercise 1.

1.Many industries are highly automated or use [automation](https://lms.kgeu.ru/mod/page/view.php?id=50187) technology in some part of their operation. In communications and especially in the telephone industry, dialing, transmission, and billing are all done automatically. Railroads too are controlled by automatic signaling devices, which have sensors that detect cars passing a particular point. In this way the movement and location of trains can be monitored.

2. In the telephone industry, dialing, transmission, and billing are all done automatically.

3.Signaling devices have sensors that detect cars passing a particular point. In this way the movement and location of trains can be monitored.

4.Agriculture, sales, and some service industries require less degree of [automation](https://lms.kgeu.ru/mod/page/view.php?id=50187).

5.Yes, we can state that the concept of [automation](https://lms.kgeu.ru/mod/page/view.php?id=50187) is developing rapidly because the applications of [automation](https://lms.kgeu.ru/mod/page/view.php?id=50187) techniques vary both within a plant or industry and also between industries.

6.Continuous-flow method of production is a method where crude oil enters at one point and flows continuously through pipes in cracking, distillation, and reaction devices as it is being processed into such products as gasoline and fuel oil. It’s used, for example, in the oil and chemical industries.

7.An array (range, group, selection) of automatic-control devices governed by microprocessors and coordinated by a central computer is used to control valves, heaters, and other equipment, thereby regulating both the flow and reaction rates.

8.Steel ingots may be processed automatically into sheet or structural shapes by being squeezed through a series of rollers until the desired shape is achieved.

9.This technique approximates the continuous-flow concept but involves transfer machines; thus, from the point of view of the auto industry, transfer machines are essential to the definition of [automation](https://lms.kgeu.ru/mod/page/view.php?id=50187).

10.It's step by step manufacturing.

11.Automated machines are used in all or part of manufacturing processes in the oil, chemical, steel, beverage, canned food, automobile, telephone industries.

12.Each industry has a concept of [automation](https://lms.kgeu.ru/mod/page/view.php?id=50187) that fits its particular production needs. The example of full automated industry is automobile industry. The example of  semi-automated production is agriculture production.

13.A checkout counter in supermarket may be automated.

14.The widespread use of [automation](https://lms.kgeu.ru/mod/page/view.php?id=50187) and its influence on daily life provides the basis for the concern expressed by many about the influence of [automation](https://lms.kgeu.ru/mod/page/view.php?id=50187) on society and the individual.

15.Automation provides the basis for the concern expressed by many about the influence of it on society and the individual.

Exercise 2.

1. Railroads too are controlled by automatic signaling devices.
2. The agriculture industry may become more mechanized, especially in the processing and packaging of foods.
3. In beverage and canned food industries some of the products are produced in batches.
4. When a steel furnace is charged and brought up to heat a very little automation is needed.
5. The ingots are processed automatically into sheet or structural shapes.
6. The automobile and other consumer product industries use the mass production techniques of step-by-step manufacture and assembly.
7. Most of the modern industries use automated machines in all or parts of their manufacturing processes.
8. Each industry has a concept of automation that fits its particular production needs.
9. More examples of automation can be found in almost every phase of commerce.
10. The widespread use of [automation](https://lms.kgeu.ru/mod/page/view.php?id=50187) and its Influence on daily life provides the  concern expressed by many about the influence of [automation](https://lms.kgeu.ru/mod/page/view.php?id=50187) on society and the individual.

Exercise 3

1. True. (All industries are highly automated or use [automation](https://lms.kgeu.ru/mod/page/view.php?id=50187) technology in some part of their operation)
2. False. (In communications and especially in the telephone industry, dialing, transmission, and billing are all done manually)
3. True. (Railroads are controlled by automatic signaling devices)
4. False. (Agriculture, sales, and some service industries are easy to automate)
5. False. (Doctors consult a computer to assist in diagnosis and computer also make the final decision and prescribe therapy)
6. True. (The concept of [automation](https://lms.kgeu.ru/mod/page/view.php?id=50187) is growing rapidly)
7. True. (In petrochemical industry an array of automatic-control devices are used to control valves, heaters, and other equipment)
8. True. (The [automobile industry](https://lms.kgeu.ru/mod/page/view.php?id=51537) uses the mass production techniques of step-by-step manufacture and assembly)
9. False. (In auto industry the volume of power consumed is essential to the definition of [automation](https://lms.kgeu.ru/mod/page/view.php?id=50187))
10. False. (The widespread use of [automation](https://lms.kgeu.ru/mod/page/view.php?id=50187) doesn’t influence our daily life)

Exercise 4

1.Механизация часто используется для элементарной замены человеческого труда машинами.

2.Автоматизация обычно означает интеграцию машин в систему самоуправления.

3.Автоматизация произвела революцию в тех областях, в которых она была внедрена.

4.Едва ли существует область современной жизни, которая не была бы затронута автоматизацией.

5.Термин автоматизация был придуман в автомобильной промышленности около 1946 года для описания растущего использования автоматических устройств и управления в механизированных производственных линиях.

6.Происхождение этого слова приписывается Д.С. Хардеру, техническому руководителю компании Ford Motor Company.

7.В общем случае автоматизацию можно определить как технологию, связанную с выполнением процесса с помощью запрограммированных команд в сочетании с автоматическим управлением и обратной связью для обеспечения правильного выполнения инструкций.

8.Автоматическая система способна работать без вмешательства человека.

9.Продвинутые системы представляют собой уровень возможностей и производительности, который во многом превосходит возможности человека по выполнению одних и тех же действий.