What is engineering?



1. Read the text and translate the 2 passage.

2.

1 Engineering is everywhere

Almost everything we use in modern life is made by engineers. For example, if a manufacturer wants a faster car, a smaller personal stereo, or a better pen, they will ask a design engineer to find a practical solution.

2 Engineering is both theoretical and practical

Engineers use theory (ideas about engineering) to produce practical answers. The design solution must be a reasonable price, safe, and reliable. A new idea that is expensive, dangerous, or doesn't always work is not a good solution.

3 Engineers use a method

Generally, engineers solve problems in a methodical way. Engineers:

1 define the problem,
2 design a solution,
3 test the solution,
4 evaluate the solution.

If the solution isn't right, the process is repeated. When a good solution is found, the next step is to:

5 communicate the solution.

4 Anyone can use engineering ideas

This method of problem-solving is useful in everyday life. For example, you can use the five steps next time you prepare for a test.

1 Define the problem: I want to pass my test next week.
2 Design a solution: I will study for three hours a day.
3 Test the solution: Study for three hours a day and take the test.
4 Evaluate the solution: Have I passed the test with a good mark? Yes = a good solution. No = a bad solution, so think of a better one.
5 Communicate the solution: Tell your friends about your test-passing technique.

3.

Read the four paragraphs again and decide if the sentences (1–4) below, are true (T) or false (F).

1 Lots of things are made by engineers. T/F
2 Engineering isn't practical. T/F
3 Engineers must think carefully. T/F
4 Only engineers can solve problems. T/F

4.

Match the highlighted words from the text with the meanings (1–7) below.

1 plan
2 say exactly
3 a business
4 answer
5 careful
6 assess the success of
7 normal

5. Write the verbs which describe the steps of problem-solving in the correct order

6. Use part 4 of the text as an example and describe the steps of the following problem:
You want to go away for a weekend with your friends but your parents want you to study

Define the problem

Design the solution

Test the solution

Evaluate the solution

Communicate the solution

LIVEWORKSHEETS