

Assess Yourself!

If you are wondering whether engineering is the career path for you, check out the following two quizzes

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Quiz #1: Do you fit the profile?

Would an engineering career fit your interests and lifestyle? Answer these questions and find out.

1. Do you get good grades in math and science? Yes/No
2. Do you enjoy knowing how things work? Yes/No
3. Do you ever think of new or better ways to do things? Yes/No
4. If you get a gift that says “Assembly Required” do you put it together yourself? Yes/No
5. Do you like to work with computers and play video games? Yes/No
6. Do you like mazes and jigsaw puzzles? Yes/No
7. Do you usually make sound decisions, and do people trust your judgement? Yes/No
8. Can you express yourself easily and clearly? Yes/No
9. Do you work well with others? Yes/No
10. Do you like to know “why”? Yes/No

If you answered yes to most of the questions, your potential for success in engineering is high. Let's examine each of the 10 questions to see how a “yes” answer helps identify you as a potential engineer.

1. Math and science are basic tools in engineering.
2. Wanting to know “how it works” is essential to finding better ways to design things.
- 3 & 4. The desire to figure things out and “do it better” is an important drive in engineers.
5. Computers and video games provide an introduction to working with graphics as well as to problem solving.
6. Analytical problem solving, the skill you use when working on mazes and puzzles, is among the most important aspects of engineering work.
7. As an engineer, your ability to focus on the problem at hand and make knowledgeable comments and decisions will help you gain respect and will make you a valuable member of the engineering team.
8. Engineers must be able to explain ideas and decisions to all audiences.
9. Engineers work with technologists and technicians as a team. They must be able to work with people who have different backgrounds and special interests.
10. Wanting to know how things work is something that drives all engineers. This curiosity encourages engineers to break complex problems into more simple ones that will be easier to handle.

Quiz #2 Test Your Aptitude

The National Engineering Aptitude Search+ helps you assess your ability to study engineering. Here's a sampling:

Mathematical Understanding:

1. If $(x + a)(x + b) = x^2 + 5x + 6$ for all x , then what is the value of ab ?
 - a. 2
 - b. 3
 - c. 5
 - d. 6
 - e. 30
2. Three identical cubes with edges 2 inches long are placed one on top of the other. What is the volume in cubic inches, of the resulting rectangular solid?
 - a. 48
 - b. 24
 - c. 18
 - d. 12
 - e. none of the above
3. A 45-inch piece of ribbon was cut into 3 pieces. The second piece was 3 times as long as the first, and the third piece was 2 times as long as the second. How long, in inches, was the third piece?
 - a. 30
 - b. 27
 - c. 18
 - d. 15
 - e. 9

Answers:

1. D: $(x + a)(x + b) = x^2 + ax + bx + ab = x^2 + (a+b)x + ab = x^2 + 5x + 6$. Therefore, $ab = 6$.
2. B: the volume of a cube is s^3 where s is one edge of the cube. So, each of the three cubes has a volume of 8, and the volume of the three stacked cubes is 24.
3. B: Let x = the first piece of ribbon. The second piece of ribbon has a measure of $3x$. The third piece of ribbon is $2(3x)$ or $6x$. The sum of the three pieces is 45, so $x + 3x + 6x = 45$ and $x = 4.5$. Therefore, the length of the third piece is $6(4.5) = 27$.