

## BASIC SURFACES FOR ENGINEERING



Figure 00. Main stairs of Engineering School of Bilbao II. Picture made by the authors, 2018.

### 3. Test of flat sections of surfaces



## Instructions

The questions presented are multiple choice questions, with only one correct answer.

The solutions are at the end of the document.

## Flat section test of surfaces

1. Generally speaking, what geometric shape results when a pyramid is cut through a plane?
  - a. Two straight lines
  - b. A closed polygon
  - c. One circumference
  - d. A conical curve
  
2. Generally speaking, what geometric shape results when a cone is cut through a plane?
  - a. Two straight lines
  - b. A closed polygon
  - c. One circumference
  - d. A conical curve
  
3. Generally speaking, what geometric shape results when a sphere is cut through a plane?
  - a. Two straight lines
  - b. A closed polygon
  - c. One circumference
  - d. A conical curve
  
4. What geometric shape results when a pyramid is cut through a plane passing through its vertex?
  - a. Two straight lines
  - b. A closed polygon
  - c. One circumference
  - d. A conical curve

5. What geometric shape results when a cone is cut through a plane that passes through its vertex?
  - a. Two straight lines
  - b. A closed polygon
  - c. One circumference
  - d. A conical curve
  
6. What geometric shape results when a cylinder is cut through a plane parallel to the directrix?
  - a. Two straight lines
  - b. A closed polygon
  - c. One circumference
  - d. A conical curve
  
7. What geometric shape results from cutting a cone through a plane that cuts all the guidelines?
  - a. An ellipse
  - b. A parable
  - c. An hyperbola
  - d. Two straight lines
  
8. What geometric shape results when a cone is cut through a plane parallel to a guideline?
  - a. An ellipse
  - b. A parable
  - c. An hyperbola
  - d. Two straight lines
  
9. The shape of the sections resulting from cutting a prism through two planes parallel one to each other are:
  - a. Same
  - b. Different
  - c. Homotheticals
  - d. Related



10. What shape does it result in when a convex cylinder is cut through a straight line?
- a. One point
  - b. Two points
  - c. A straight line
  - d. Two straight lines

## Solutions for flat surface section testing

1b, 2d, 3c, 4a, 5a, 6a, 7a, 8b, 9a, 10b