

## FAQs

### **1. What is setting out of land and building plan mean in land survey?**

- Setting-out of a building – marking of a building position, size and shape in terrain.
- Setting-out plan – plan where a projected building is drawn and numeric values of setting-out elements are written.

### **2. How does setting out right angles and perpendicular lines done on site during land surveying?**

In survey work, it is often necessary to set out right angles or perpendicular lines on the field. In the sections that follow, a few practical methods indicate how this can be done. These methods include:

- The 3-4-5 method: used to set out a right angle from a certain point on the base line.
- The rope method: used to set out a line perpendicular to the base line, starting from a point which is not on the base line;
- The single prismatic square and the double prismatic square: used to set out both right angles and perpendicular lines.

### **3. What is the difference between single and double prismatic square method?**

#### **THE SINGLE PRISMATIC SQUARE:**

- The prism of the single prismatic square is fitted in a metal frame with a handle. Attached to the handle is a hook to which a plumb bob can be connected.
- The special construction of the prism enables to see at right angles when looking through the instrument.

- The single prismatic square or single prism can be used to set out right angles and perpendicular lines.

### **THE DOUBLE PRISMATIC SQUARE:**

- The double prismatic square, also called double prism, has two prisms. The two prisms are placed in such a way that it is possible to look at the same time at a right angle to the left and to the right;
- It is possible to see the base line and the perpendicular line at the same time; no assistant is needed to check if the operator is standing on the base line, as is the case with the single prismatic square.

### **4. Explain 3-4-5 method briefly**

- To set out right angles in the field, a measuring tape, two ranging poles, pegs and three persons are required.
- The first person holds together, between thumb and finger, the zero mark and the 12m mark of the tape. The second person holds between thumb and finger the 3m mark of the tape and the third person holds the 8m mark.
- When all sides of the tape are stretched, a triangle with lengths of 3 m, 4m and 5m is formed, and the angle near person 1 is a right angle.
- NOTE: Instead of 3 m, 4 m and 5 m a multiple can be chosen: e.g. 6 m, 8 m and 10 m or e.g. 9 m, 12 m and 15 m.

### **5. What are the various stages involved in land survey for setting out plan?**

- Creation of a setting-out net (measurement, calculation and marking of survey stations which can be used for setting-out)
- Setting-out of the spatial position of a building = setting-out of the building main position line (= frontage), setting-out of the axis or the main points of a linear structure (road, railway, watercourse)

- Detailed setting-out = setting-out of a building size and shape.