



# QUICK RESPONSE

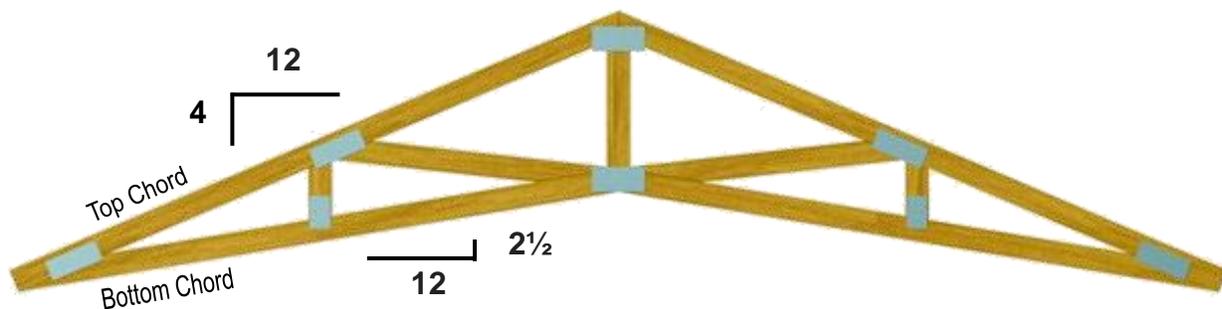
*Saving life and property through effective licensing, plan review,  
and inspection of fire protection systems.*

July 2012

## Pitch

**Pitch** or slope refers to the amount of vertical measurement (rise) compared to horizontal measurement (run).

The scissors truss pictured below shows the **pitch** of the upper chord as 4/12, meaning that for 4-inches of vertical measurement (rise) the horizontal measurement (run) is 12-inches. The **pitch** of the bottom chord is 2½/12.



**NFPA 13** defines various ceiling types that are used throughout the standard. Two of the ceiling types are *Horizontal Ceiling* and *Sloped Ceiling*. A horizontal ceiling is allowed to have a pitch (slope) that does not exceed 2/12. Once the pitch (slope) exceeds 2/12 it is a sloped ceiling. A ceiling attached directly to the bottom chord of the scissors truss pictured above would be considered a sloped ceiling since the pitch (slope) exceeds 2/12.

Another ceiling type defined in **NFPA 13** is a *Flat Ceiling*. It is important to note that a flat ceiling is defined as “a continuous ceiling in a single plane.” This does not mean that a flat ceiling is horizontal. In many instances and applications, flat ceilings have some type of slope.

Reference to **pitch** or slope is not limited to roof or ceiling configurations. In numerous instances, such as areas subject to freezing where proper drainage of piping is critical, sprinkler piping is to be installed with a specified minimum **pitch**. Another example is preaction systems where branch lines shall be **pitched** at least ½-inch per 10-feet, and mains shall be **pitched** at least ¼-inch per 10-feet.