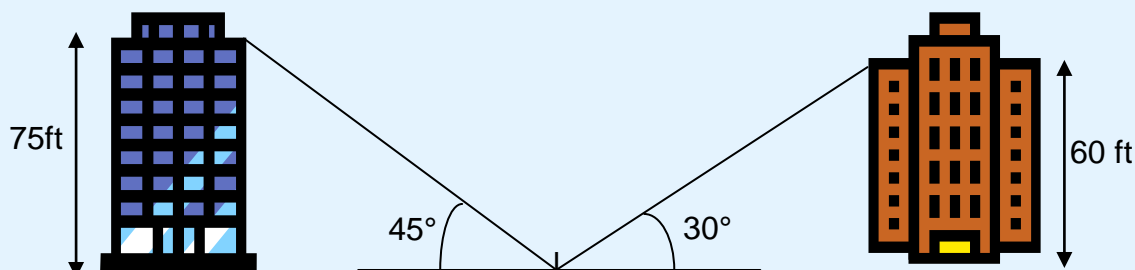


MATHEMATICS

Level Two

“Buildings”

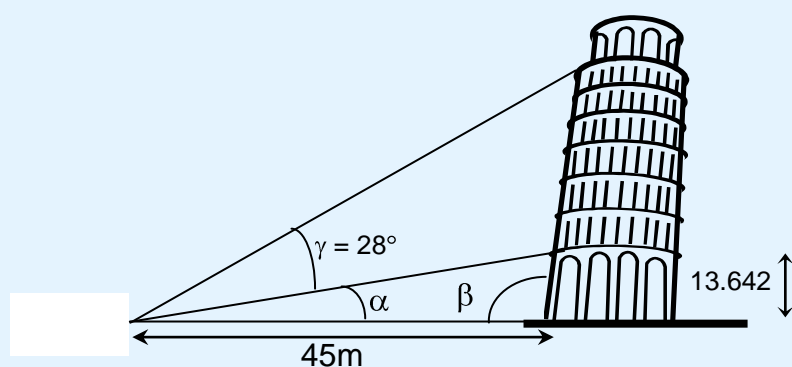
Setting: A surveyor sets up in the middle of the road and measures the elevation to the top of both buildings as shown below.



- 1) Convert the heights from feet to metres. ($1 \text{ ft} = 0.3048\text{m}$)
- 2) Calculate how far apart the buildings are

Task B

The Leaning Tower of Pisa has been surveyed and the following information obtained. The tower currently leans at an angle of 5.5° from the vertical. The angle γ was measured at 28° . The height to the first storey was measured as being 13.642 m. This measurement was made along the slant of the building.



1. What is the value of β ?
2. What is the value of α ?

3.

If the Bell Chamber at the top of the tower was measured to be 8.243m, find the total height of the Tower, measured along the slant.