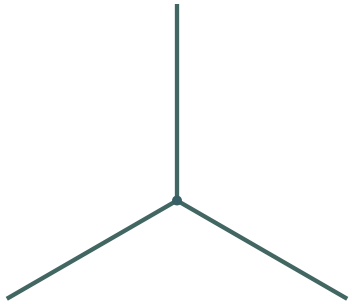
Rolling Offset Isometric Drawing

Reference | Isometric axes | LETTER

Reading the axes

The vertical axis and two axes at 30 degrees to the horizontal meet at one origin.

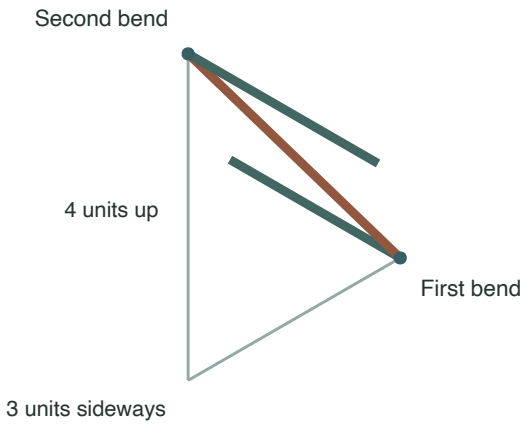


Rolling Offset Isometric Drawing

Reference | Worked example | LETTER

Original prompt

Draw a rolling offset with horizontal change 3 units and vertical change 4 units, and compute the travel.



True travel: 5 units. Diagram uses isometric projection.

Answer

Travel = square root of (3 squared + 4 squared) = square root of 25 = 5 units. The drawing shows the first bend at the origin, the travel rising to the second bend point 3 units along the second horizontal axis and 4 units up, and the run continuing parallel to the original axis.

Reasoning

The horizontal and vertical changes form the legs of a right triangle whose hypotenuse is the travel. Squaring 3 and 4 gives 9 and 16; their sum is 25; the square root is 5.

Check

Check the two bend points and parallel end runs. The travel is the only pipe segment away from the axes. Verify 3 squared + 4 squared = 25 and the square root is 5.