



Connecting Big Ideas in Geometry

Chapter 8 Measurement

Big Idea: Measurement

You can use coordinates and certain relationships between pairs of corresponding parts to prove triangles are congruent in the coordinate plane

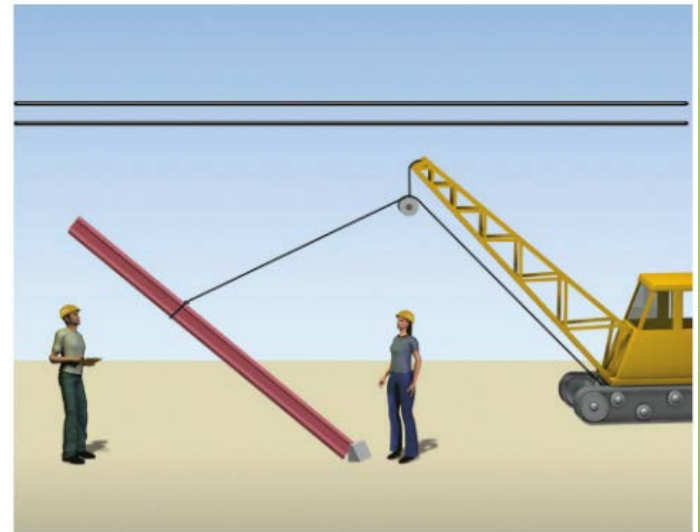
YOUR TASK

- Using **detailed steps**, describe your solution to the problem on the next slide
- Your steps should be **clear** enough so that any geometry student can complete them

Big Idea: Measurement

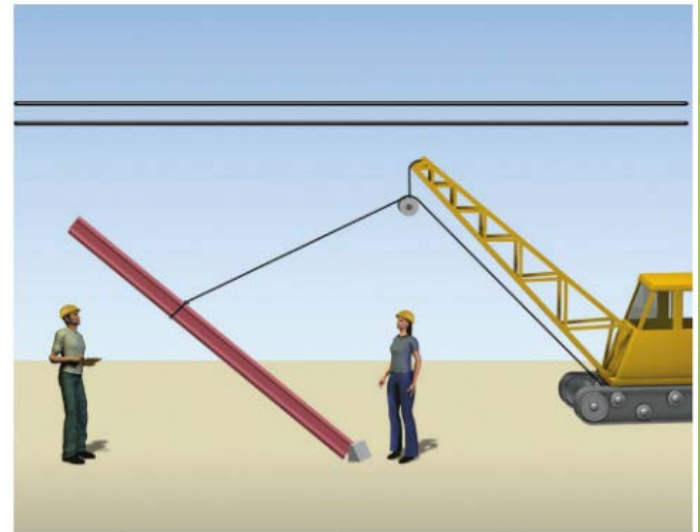
PROBLEM

- A construction crew wants to hoist a heavy beam so that it is standing up straight
- They tie a rope to the beam and secure its base (the bottom)
- Then they pull the rope to raise the top end of the beam off the ground



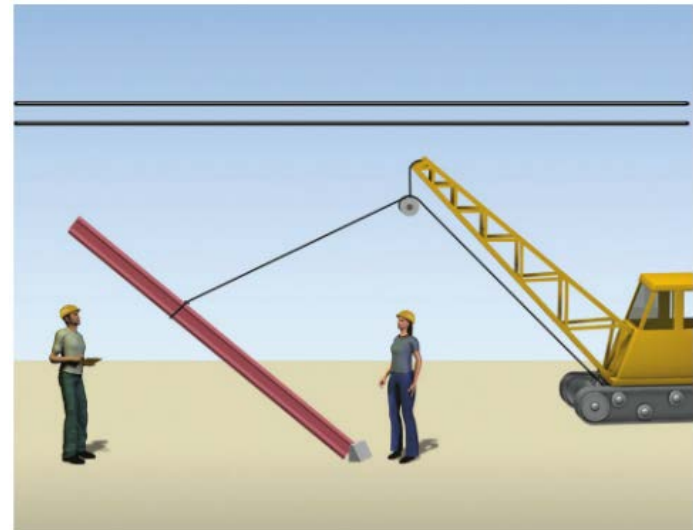
Big Idea: Measurement

- When the beam makes an angle of 40 degrees with the ground, the top of the beam is 8 feet above the ground
- There are telephone wires nearby and the workers are worried that the beam may hit the wires



Big Idea: Measurement

- When the beam makes an angle of 60 degrees with the ground, the wires are 2 feet above the top of the beam
- Will the beam hit the wires if the crew continues to raise it?



Submit to the Dropbox

- Write your solution in one Word document
- Write in paragraph form with **details** and **explanations**
- Use geometry language
- Include any
 - **Formulas** you used
 - **Algebra steps** you completed
- Submit your document to the dropbox

Using Geometry Language

- Microsoft Word supports some symbols
- However it might be easier to write the names of objects, functions, units, etc.
 - The hypotenuse of triangle ABC is BC
 - Angle M is 90 degrees
 - The sine of 30 degrees is $1/2$