

Project INSPIRE
Assignment 2
Geometry and Tactile Graphics
for Students in Grades 3 to 8

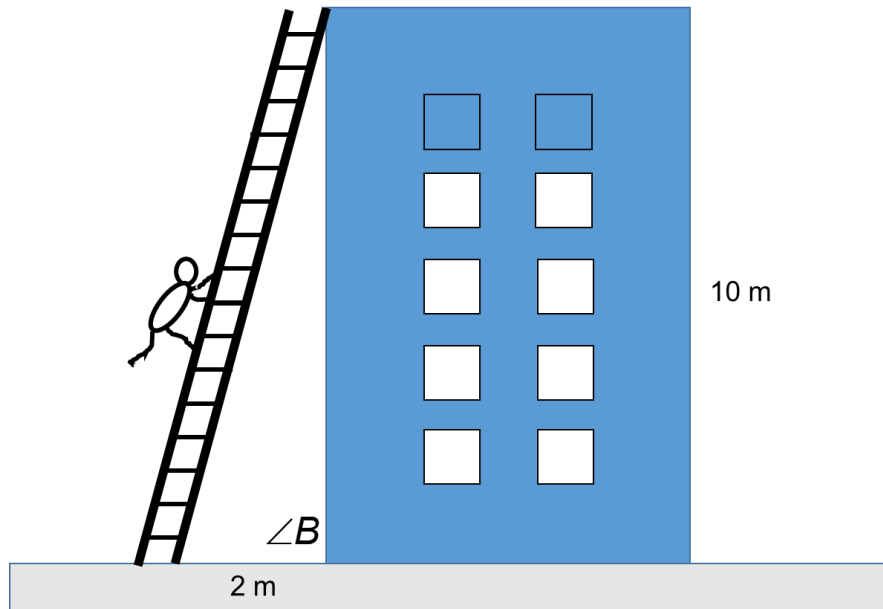
Email your completed response for Assignment 2 to therzberg@uscupstate.edu. Please put "Geometry and TG Assignment 2" in the subject line. After the course ends you'll receive a file of sample responses turned in by those taking the course.

Kamon is a 7th grader in Mr. Murphy's gifted math class. She is a proficient braille reader and has been increasing her understanding and ability to accurately interpret tactile graphics. This is a fast-paced class that covers a lot of material during each lesson. The class is preparing for small group projects where students will be modeling and demonstrating real life measurements of angles in triangles. The ladder graphic on the next page is a realistic example that Mr. Murphy explains to the class and then models with a ladder on the side of the school building. To promote active engagement, each group of 2-3 students will create a plan to illustrate and then demonstrate their real-life geometry problem. At the end of the week, each group will present their project to the class. You are supporting Kamon in her math class and will be making decisions on how to ensure the information is accessible and meaningful.

1. Based on Lucia Hasty's Decision-Making Tree Process, how would you present the ladder graphic Mr. Murphy created for the class, considering you had at least 24 hours prior notice? If you choose to simplify, explain how you would simplify the graphic. If you choose not to simplify, justify your reasoning.
2. How would you create the graphic and what materials would you use? If you would like, you are welcome to make the graphic and include a picture of it within your assignment!
3. Describe how you would present the ladder graphic differently if you had to create it "on the fly" with less than 1 hour notice.
4. Kamon has demonstrated some difficulty reading similar tactile graphics. What strategies can you implement or recommend to help her keep up with the work flow during class?
5. Kamon's group will be creating a drawing of their project to share with the class and reviewing the other group's drawings during presentations. How can you support Kamon with drawing their real-life graphic? What materials can you use to ensure she has access to the other group's information?

Ladder Math

Use the picture below to help you solve the problems!



1. What is $m\angle B$?
2. What kind of triangle does the ladder, building, and ground make?
3. If the building and ground are the legs of the triangle, then the ladder is the _____.
4. How long is the ladder?
5. What formula did you use to determine the length of the ladder?