

Assessing Spatial Reasoning-by Building a Storage Shed

Math 304
Summer 2014

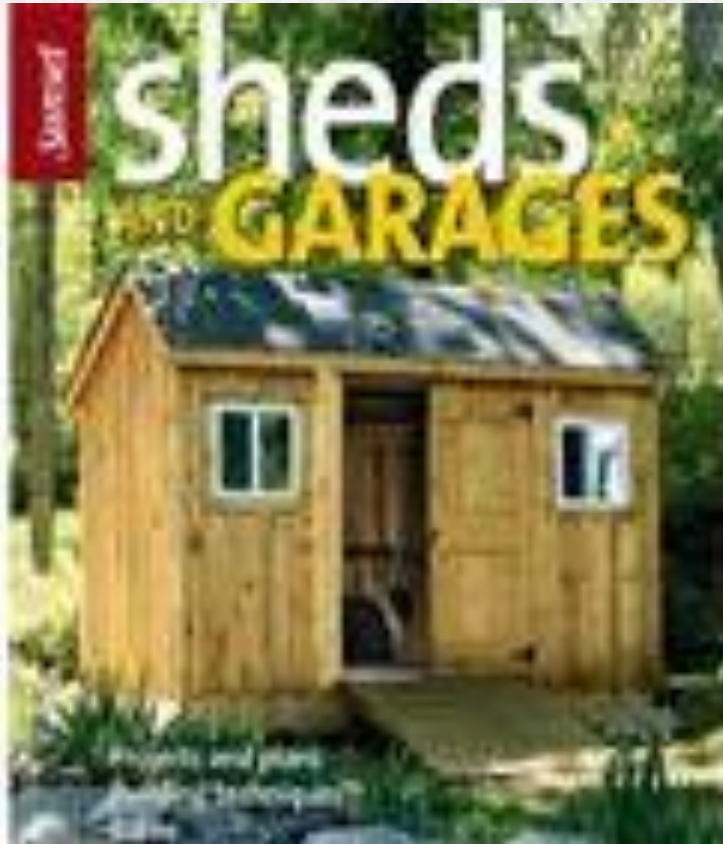
Part I - Shed Research

- 1.a. Turn in 3 pictures/sketches of sheds. You may take one of these from an advertisement, the other two are to be actual sheds you have photographed or sketched.
- b. Write a description of each shed listing dimensions of the photo. For those photographed/sketched list and the actual dimensions. Include the pitch of the roof and door size for each shed.
- c. Go to our course website and Search MN Math Frameworks or the Common Core Math standards List all the standards that relate to Part I but only the parts of the benchmark that are addressed.

Ex. MN Standard [1.3.1](#)

Benchmark: Describe characteristics of two- and three-dimensional objects, such as triangles, squares, rectangles

Shed Search



1.a. Find at least 3 different sheds and include their photo or sketch. Only 1 of these should be a photo out of an advertisement or off the internet, the others can be photos or sketches of actual sheds.

Shed Search Description

- An Example of #1.b. taken from an advertisement

This shed had a rectangular shaped front face that is 10 ft wide and 8 ft tall, with a pitch of 41° . The shed is 8 feet deep. This shed's left and right faces are pentagonal in shape, and a pair of windows 2 ft x 2 ft each on the front that give it character through symmetry. The height from the base to the peak is 10 ft.

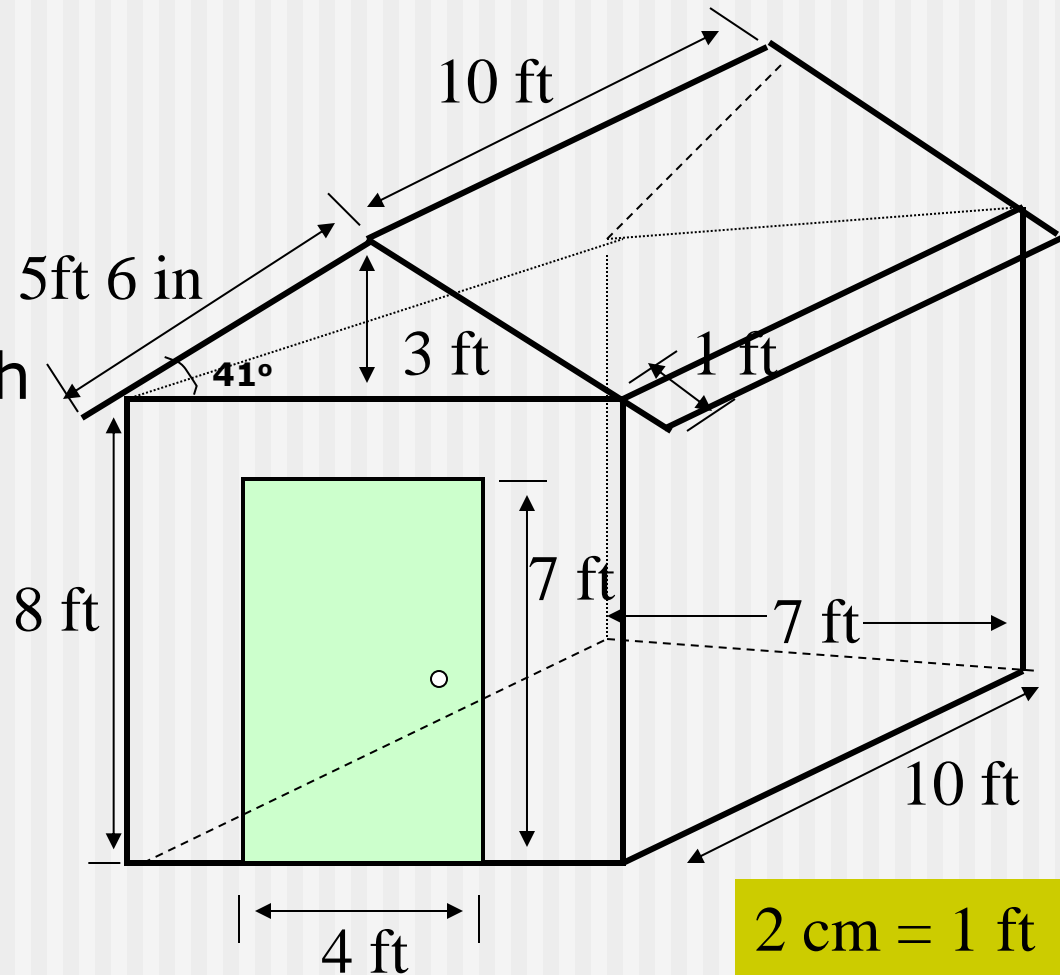
Part II- Drawings and Model

2. Make Four drawings of your own sloped roof shed:
 - a. 3-D drawing with hidden edges
 - b. a side view
 - c. a top view
 - d. a front view

3. Label the actual shed's dimensions, pitch, and used scale on each of the your drawings.

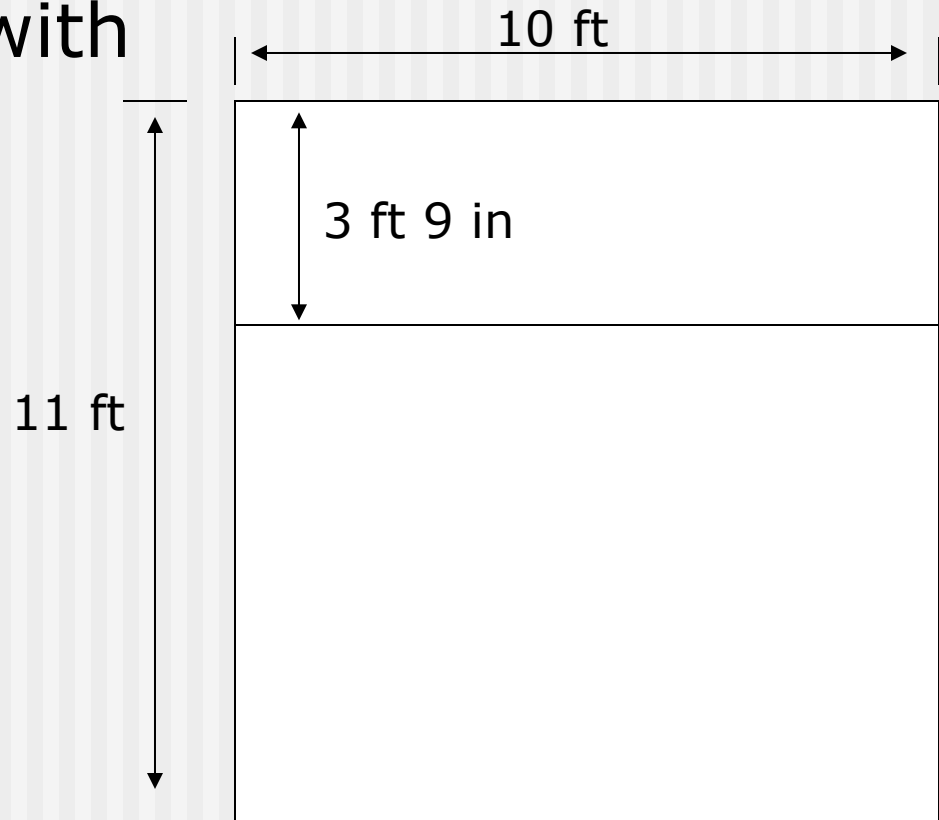
Your Design of a Storage Shed

2.a. This is an example of a 3-D drawing with hidden edges



Perspective Drawings

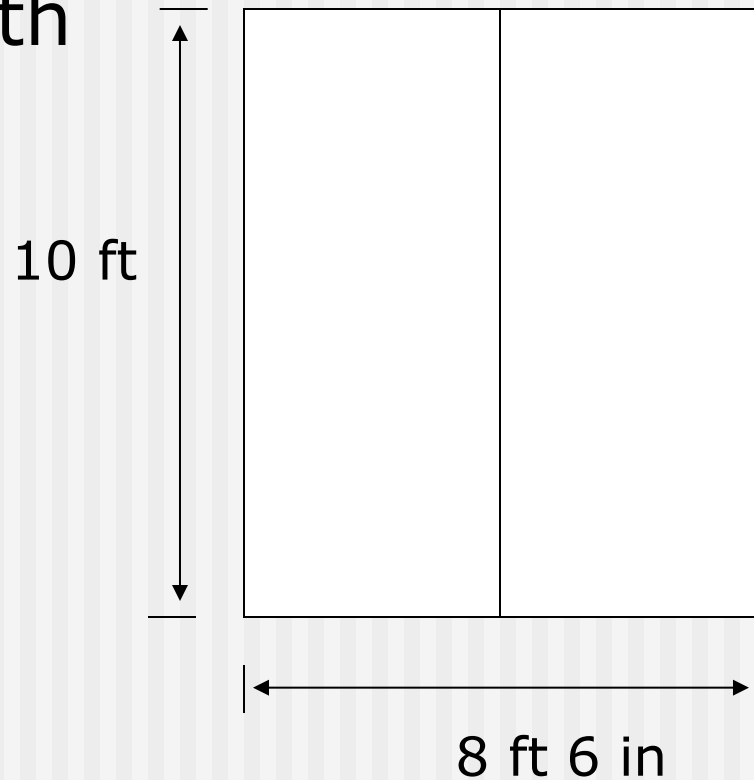
- 2.b. Side view with dimensions and scale included



2 cm = 1 ft

Perspective Drawings

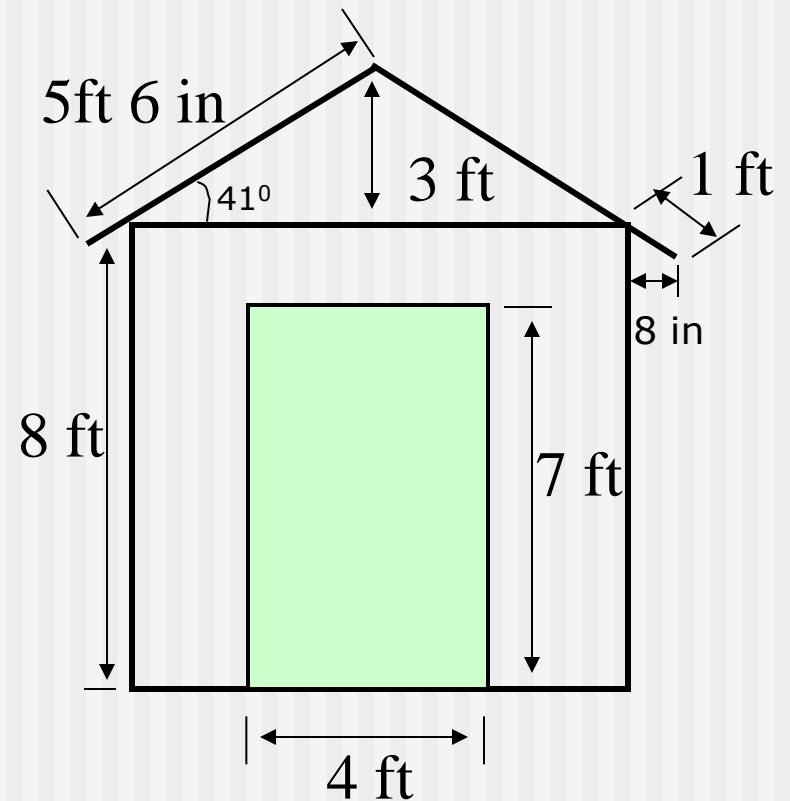
- 2.c Top View with dimensions and scale included



2 cm = 1 ft

Perspective Drawings

- 2.d. Front view with angle measurement and dimensions included



4. Model of your Shed

- It is recommended you construct your model from cardstock paper or thin foam.
- Your shed should include doors that open.
- It is up to you if you would like to include a bottom to your shed.
- Take a look at a few models and pictures around the room to get some ideas.

Suggestions for Part II

- If you are creating a shed with an overhang include the length of the of the overhang.
- Be Creative
- For # 5 your one page summary should include a paragraph on similarity. Your summary should also include a paragraph on parts of your model that are congruent to the actual shed.