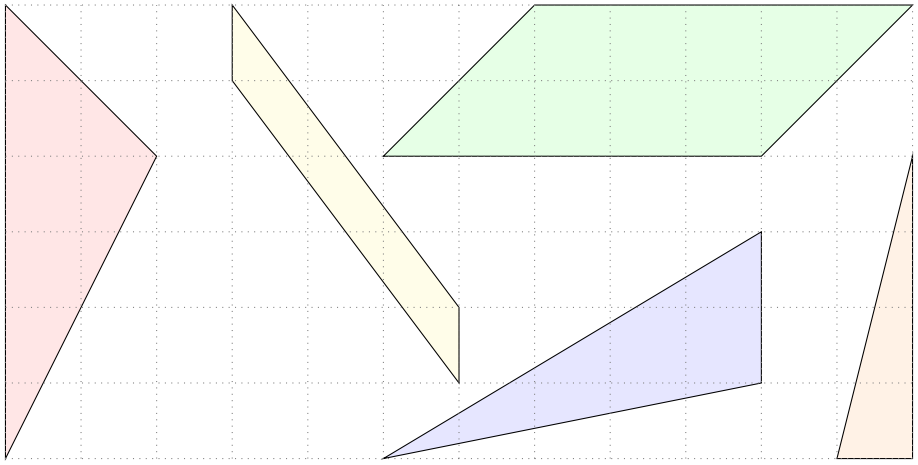
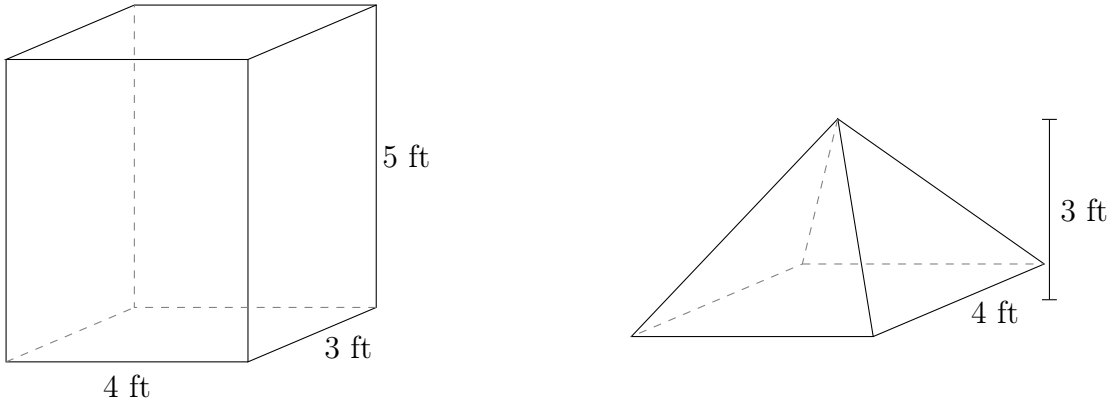
Niles's Ti*k*z Demo

Niles Johnson

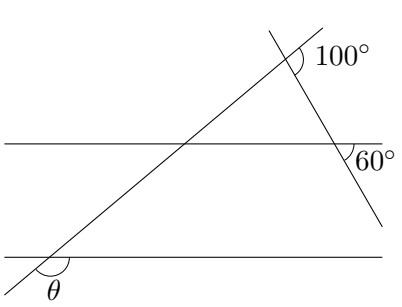
June 17, 2011

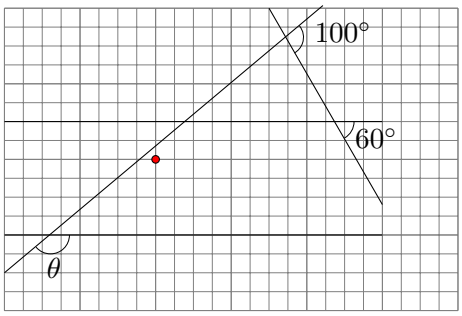


Determine the areas of the indicated shapes.



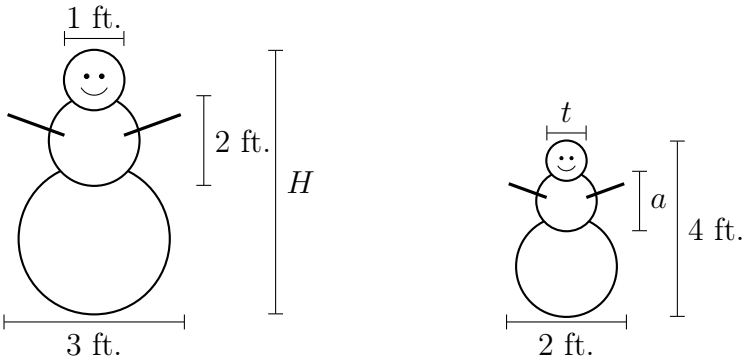
Determine the length of the longest pole that can fit in the box, and determine the lengths of the edges of the pyramid.



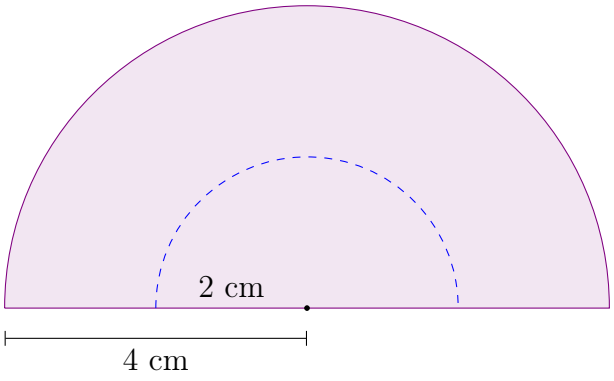


Find the measure of the angle marked θ.

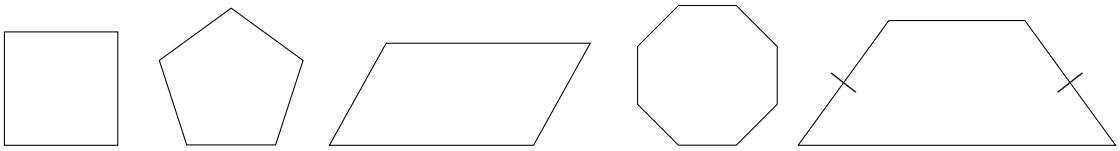
(Use the grid at right while drawing the diagram, to help determine where various things should be placed.)



Two similar snowmen.



Pattern for a right circular cone.



A square

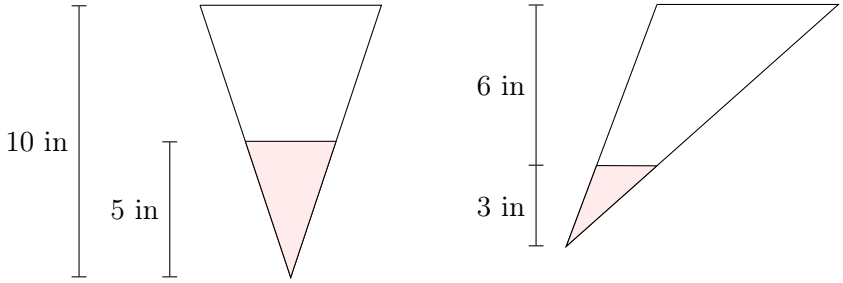
B regular pentagon

C parallelogram

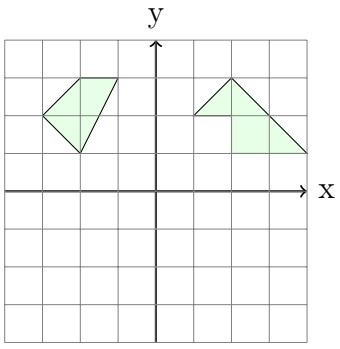
D regular octagon

E trapezoid

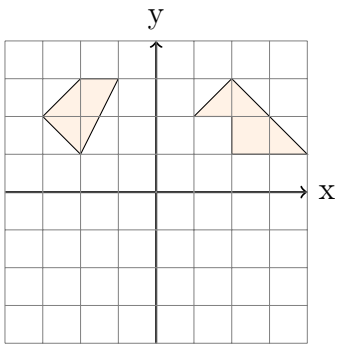
Some shapes.



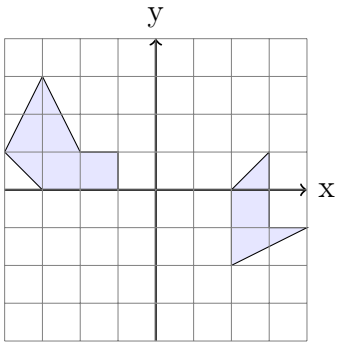
Explain for each triangle what fraction of the total area is shaded.



reflect across x-axis



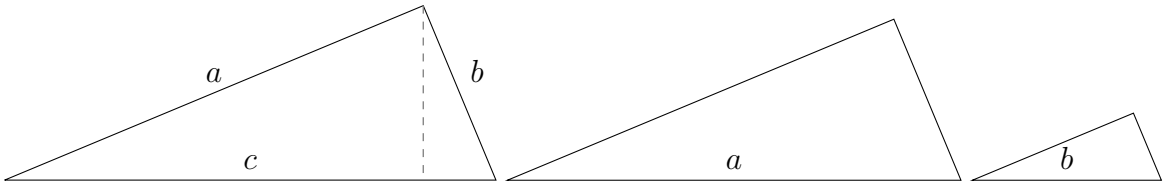
rotate around origin 180°



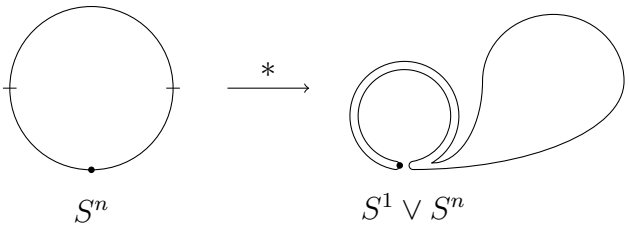
rotate around origin

90° counter-clockwise

Carry out the indicated transformations.



Use these diagrams to give at least three different proofs of the Pythagorean theorem.



Map which gives the action of π_1 on π_n.

$$X_0 \overset{p}{\leftleftarrows} X_1 \overset{p}{\leftleftarrows\!\!\leftarrow} X_2 \overset{p}{\underset{\vdots}{\leftarrow\!\!\leftarrow}} \cdots$$

A simplicial object.