

RoboTex Application

Materials

- 1 measuring tape
- 1 10X10X0.08 sheet of polystyrene plastic*
- 1 fine cutting, edged blade that cuts plastic well
- 1 safety goggles
- 1 bottle of Polystyrene cement
- 1 pair of safety gloves
- 1 permanent marker



Polystyrene plastic sheet

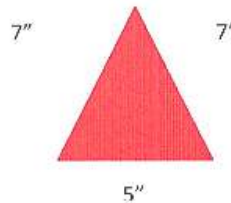
*The amount of plastic necessary can be altered according to builder. This amount is just enough to construct the pyramid.

Measurements

This pyramid that you will be constructing should be able to fit entirely within a 24 inch cube and weigh less than 24 pounds. The pyramid will have a height of 7 inches and a base area of 25 inches. The base will be a square with a side length of 5 inches. The two opposite sides of each triangle will have a height of 7 inches and the bases of course will be 5 inches each.

Procedure

1. Gather all the materials mentioned in the materials list above.
2. Draw the triangle faces with the correct measurements on the polystyrene plastic with the permanent marker.



3. After you have finished drawing them, put on your safety gloves and goggles and get ready to make precision cuts with the blade on the plastic.



4. Make careful incisions on the plastic of each designated triangle. Be sure to have your safety gloves and goggles throughout the time of cutting on the plastic sheet.



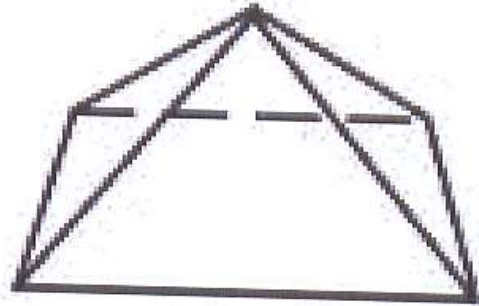
5. After you have precisely and carefully cut all of the triangular faces, it's time to cut the base of the pyramid. Be sure to have on safety goggles and gloves during this time.
6. Draw the square shaped base on the polystyrene plastic with the accurate measurement as stated above.



7. Cut the square out cautiously with the sharp-edged blade.
8. Once you have all the triangles and the base cut out, you are ready to glue the faces together to finish constructing your pyramid. Be sure you have your goggles and gloves on during this time.
9. Carefully glue with the polystyrene cement one of the 7" edges of one triangle to one of the 7" edges of another triangle.
10. Do step #9 for the remaining two triangles.
11. Now glue one of the sets of the glued triangles to the other by making sure that the bottoms of the glued fit precisely on the edges of the glued cut out.
12. Glue the base of the pyramid (5"x5" square) to the base edges of the triangles that are glued together to look like the pyramid without the base. Now your pyramid construction is finished.
13. Let the pyramid sit to dry for one hour.
14. Place it carefully into the 24" inch cube at it should fit perfectly since the pyramid is only 7" tall while the base is 5" square.



Polystyrene cement tube



What the pyramid will look after step 11 except without the base

Use of the Pyramid

The pyramid that you have constructed is used to store stationery items such as pencils, pens, envelopes, sticky notes, and other calligraphy. It will be the ideal storage item for all your school needs to help your stay organized. Have fun!