Math Club Booth Plans

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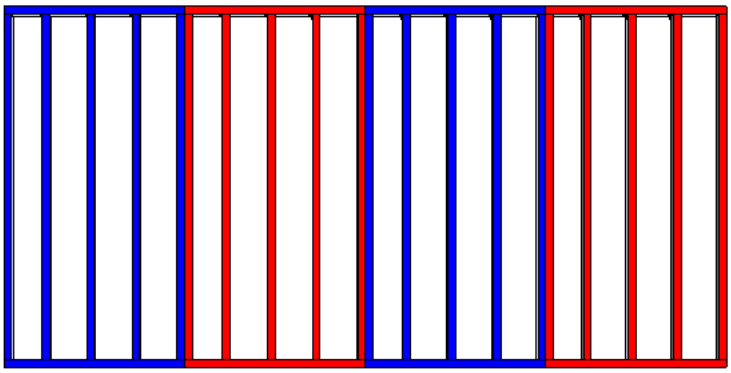
1 Floor plans

1.1 General

- All lumber fastened with $3''$ screws
- Total Dimensions: $8' \times 16'$. Symmetric across both long and short dimensions
- Two doorways, one on each short wall. Visitors will enter one end and exit the other

1.2 Floor

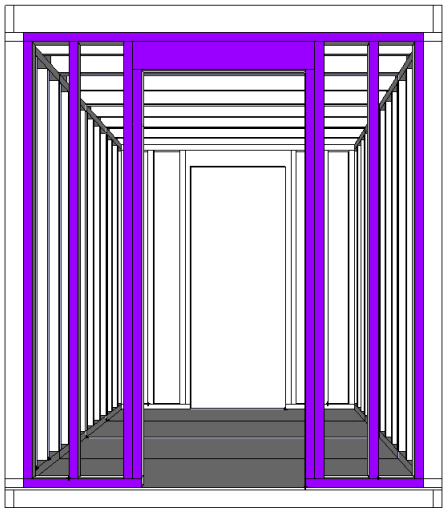


- $2'' \times 4''$ nominal construction
- Four $8' \times 4'$ platforms
- Floor boards at most $12''$ apart on center
- Covered with $1/2''$ plywood

1.3 Walls

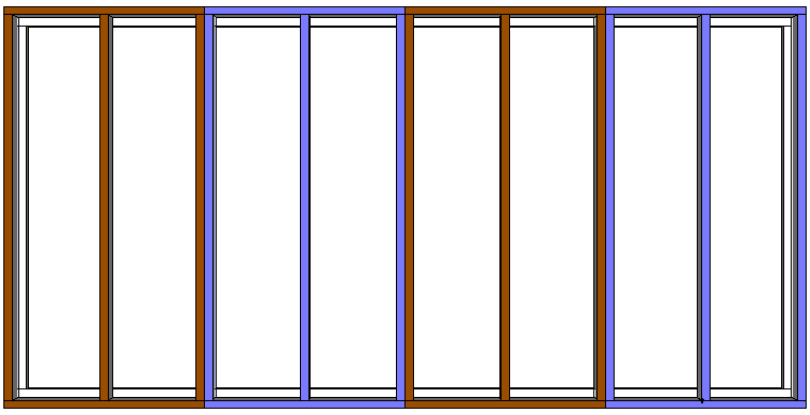
- $2'' \times 4''$ nominal construction
- Studs at most $16''$ apart on center
- Covered with $1/2''$ OSB on the outside, $1/4''$ Plywood on inside

1.4 Doors



- Doorway is $3'$ wide and $80''$ tall
- Double $2'' \times 6''$ beam above doorway
- Identical door on opposite end of booth
- Just a doorway; nothing opens or closes.
- Covered with $1/2''$ OSB on the outside, $1/4''$ Plywood on inside

1.5 Roof



- $2'' \times 6''$ nominal construction
- Four $8' \times 4'$ platforms
- Rafters span $8'$, at most $23''$ apart on center
- Covered with $1/2''$ OSB on top
- Tar Paper on top for waterproofing

2 Materials

Item	Quantity	Description
$2'' \times 4'' \times 8'$ Lumber	96	Floor, Walls, Doorways
$2'' \times 6'' \times 8'$ Lumber	18	Roof, Door headers
$8' \times 4'$, $1/2''$ Plywood	4	Floor
$8' \times 4'$, $1/4''$ Plywood	12	Interior Walls
$8' \times 4'$, $3/8''$ OSB	16	Roof & Walls
Tar Paper	128 ft^2	Waterproofing on roof
LED Puck Lights	10	Battery Powered Lights
String	$10'$	Game
Curtain	1	Game
Curtain Rod	1	Game
White Board	1	Game
Plexiglass Sheet	$4' \times 4'$	Game
Paint	Lots	Decoration

3 Electrical Elements

This booth doesn't have any electrical elements. Light will be provided by battery powered LEDs installed in the ceiling.

4 Fireproofing

All flammable materials will be treated with approved fire retardant.

5 A description of how the structure will be moved to the Midway and installed there.

As our booth is a blitz booth it can assembled on site. The booth will be moved onto Midway as lumber and then assembled there. The OSB/plywood walls will be treated with primer ahead of time to minimize paint time. Once on site we will begin by constructing the frame of the floor. Once that is in place we will level the frame, and the cover it with plywood. Meanwhile the walls will be constructed in sections and added once the floor is done. After this the roof frame will be installed in sections and then covered with OSB. After this we will install the lights and paint the booth.

6 A description of how the structure will be removed from the Midway and disposed of or stored.

The booth will be removed in the opposite manner it was put up. First the plywood will be removed from the roof and side walls. Then the roof will be taken apart in sections, followed by the walls. Each face of the booth has been designed to come apart in $8' \times 4'$ sections. Although we don't yet have a place to store these pieces, we have applied for space in the cages beneath the UC garage. Ideally, the lumber will be stored in the cages until carnival in future years. Until we are granted cage space, or in the case that we are not, we will attempt to share space with other organizations as they allow.

7 Game

The game in the booth will be several smaller activities that allow visitors to explore interesting areas of recreational math. Visitors will have the opportunity to try their wits at interesting puzzles and win small candy prizes. It will not involve projectiles, complex moving parts, danger to patrons, etc.

8 Description

To Infinity and Beyond. Come explore the mysteries of the universe and mathematics with the CMU math club. Witness impossibilities that can only be seen here and leave feeling that world is a stranger place then you ever imagined.