10×12 Open-floor Fitness Shed

Place the mat, then check the movement around and above it. This open-floor fitness example shows how deeper storage can consume the area reserved for the activity.

Are you measuring the mat or the movement around it?

Read the mat, larger activity reservation and rear cabinet separately. The comparison increases the cabinet depth while keeping its width and wall position fixed.

What the study shows

Dimensioned layout example

Increasing the rear cabinet from 16 to 28 in deep takes a 48×12 in strip from the selected activity area. Whether the activity works must be tested with the whole movement, not the mat alone.

The 84×84 in reservation does not approve any exercise, overhead reach or installed equipment.

Good for
One person testing a light, open-floor activity arrangement.

The key trade-off
The selected activity area matters more than whether the exercise mat fits.

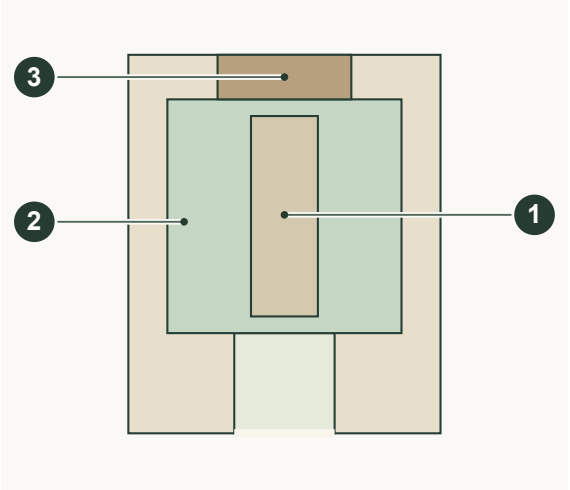
Reference material, not construction plans. Drawings disclose selected assumptions; they do not establish structural design, permit approval or species capacity.

Mat & movement area

Set up & put away

Deeper-cabinet conflict

A mat footprint is smaller than the selected activity area



Furniture is only part of the floor. 112×136 in usable floor; 36 in selected clear entry.

The mat is smaller than the movement area you need to test.

1. Portable mat

The mat footprint is 24×72 inches. Fitting this object does not establish room for the intended exercise.

2. Activity reservation

The surrounding 84×84-inch area is a disclosed test assumption. Measure the actual movement, including overhead reach.

3. Rear cabinet

The baseline cabinet is 48 inches wide and 16 inches deep. Open it before the activity, then close it and clear loose equipment.

> **Try this with your own measurements**
>
> Mark out your intended movements, including arms and overhead reach, rather than measuring the mat alone.

Take out the mat, close the cabinet and use the floor

Retrieve, close, then use the floor

01

Retrieve the mat

Open storage and take out the portable equipment before the activity.

02

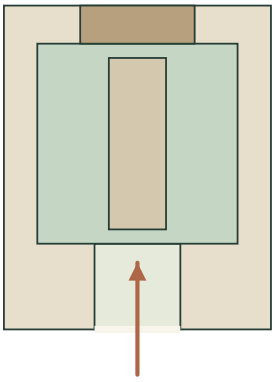
Close the cabinet

Put doors and loose objects out of the selected activity area.

03

Try the intended movement

Check your movement beyond the mat footprint, then put the equipment away before changing the arrangement.



Walk through the actual task. Open the cabinet, take out the mat, close its doors, then use the selected activity area. Put the mat away before changing the layout.

Retrieve the mat, close the cabinet, then use the open floor.

Set up

The cabinet is used before the activity; its doors are closed before using the selected area.

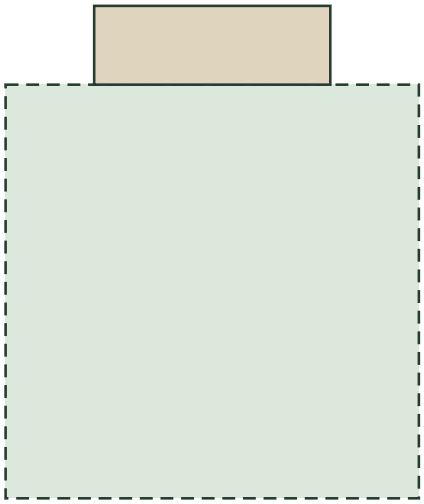
Put away

Return the mat and portable accessories before changing the arrangement.

> **Try this with your own measurements**
>
> Test the cabinet doors and retrieval action separately from the exercise movement.

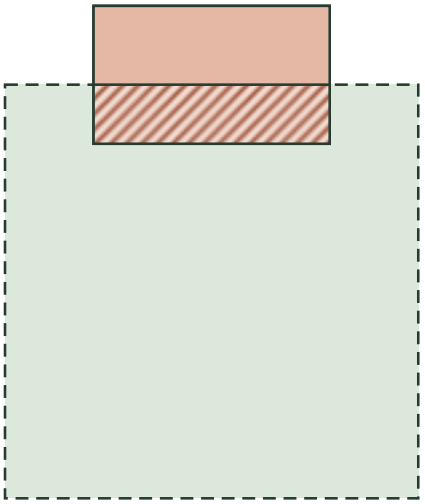
Twelve extra inches of storage take space from movement

16-inch-deep cabinet



The shallower rear cabinet meets the edge of the selected activity reservation, leaving the drawn reservation clear.

28-inch-deep cabinet



The cabinet grows toward the activity area while its rear position and width stay fixed. Hatching marks the extra intrusion.

Read the marks. Dashed green area: selected 84×84 in activity reservation. Cabinet width stays 48 in. Hatching: the 12-inch-deep intrusion. This detail does not show an exercise movement.

48 × 12 in = 576 sq in of overlap. Twelve extra inches of depth enter the selected activity area.

> **Try this with your own measurements**
>
> Measure storage depth with doors and projections, then repeat the intended floor movement.

Study notes & exact inputs

A mat footprint is smaller than the selected activity area

Original diagram. Authored reference; inches unless marked unknown.

Gear cabinet: 48×16 in at (32,120). Coordinates start at the front-left corner; x runs right and y runs toward the rear.

The 24×72 in mat is deliberately inside the 84×84 in activity reservation. A mat footprint alone is not the space needed for a person in motion. Measure your intended movements, ceiling height and equipment before adopting any arrangement.

Mat footprint. The loose mat is 24×72 inches.

Selected activity area. The surrounding 84×84-inch rectangle is a test reservation. It does not approve a particular exercise or ceiling clearance.

Take out the mat, close the cabinet and use the floor

Original diagram. Authored reference; inches unless marked unknown.

Open the cabinet, take out the mat, close its doors, then use the selected activity area. Put the mat away before changing the layout.

The green route is a selected straight approach. Door operation, turns, reach and furniture movement still need a physical mock-up with your own measurements. No doorway height or outdoor approach is inferred.

Twelve extra inches of storage take space from movement

Twelve extra inches of cabinet depth occupy the activity reservation.

Dashed green area: selected 84×84 in activity reservation. Cabinet width stays 48 in. Hatching: the 12-inch-deep intrusion. This detail does not show an exercise movement.

Replace only the 48×16 in cabinet with a 48×28 in cabinet against the same rear wall. Its front advances 12 in into the activity reservation, occupying 576 square inches. The nominal shed size and activity target stay unchanged.

Keep the original floor, entry and task reservation fixed when comparing alternatives. Change one input at a time so the benefit or loss remains visible.

Same rear wall. The cabinet remains 48 inches wide but grows from 16 to 28 inches deep.

Read the intrusion. Its front advances 12 inches into the selected area, creating a 48×12-inch overlap.

Measure the movement before choosing storage depth

Use the drawings as a starting point. Record the result of each check before carrying this arrangement into your own plan.

1. Mark the whole movement

The 24×72 in mat is smaller than the selected 84×84 in activity reservation. See the drawing

Measure or try

Record the intended movement's floor extent and overhead reach in the actual space.

Change the arrangement if…

If it reaches furniture, walls or the ceiling, change the arrangement or intended activity; mat fit does not settle the question.

2. Budget cabinet depth against that movement

48 × (28 − 16) = 576 sq in of extra cabinet footprint enters the selected activity reservation. See the drawing

Measure or try

Mark the cabinet front, projections and your measured movement area on the same floor.

Change the arrangement if…

If they overlap, reduce or relocate the storage and repeat the movement check.

3. Separate setup from use

The illustrated sequence retrieves equipment before activity and closes the cabinet before using the reserved floor. See the drawing

Measure or try

Open the actual doors, retrieve and return the equipment, and identify where loose pieces are placed.

Change the arrangement if…

If setup leaves doors or equipment in the activity area, revise the storage or routine before use.

Measure movement in three dimensions

Floor movement	Overhead reach	Storage operation
Mark the actual width and length needed for the intended movement.	Measure the relevant ceiling and obstructions; the floor rectangle does not address them.	Test cabinet doors and retrieval separately from the activity itself.

Where this reference fits

- One person testing a light, open-floor activity arrangement.
- Storing a mat and small portable accessories outside the selected movement envelope.

Trade-offs

- An 84×84 in rectangle is a selected test area, not proof that a particular exercise fits.
- The baseline omits heavy equipment, wall-mounted apparatus and an overhead movement assessment.

Still to assess

- Measure the finished usable floor, clear doorway, door swing and ceiling height; nominal size does not supply these.
- Confirm local use, services, heating/cooling, ventilation and moisture strategy before converting or ordering a shed.
- Verify furniture operation and actual human movement on site; these reservations are not accessibility or ergonomic approvals.
- Floor capacity, structure, foundations, electrical installation and overnight accommodation are outside this study.

Appearance & material choices

A light-fitness direction built around open floor rather than equipment density. The green exterior and pale interior are finish concepts; the activity rectangle is an explicit planning assumption.

A mat is not the movement envelope

The mat sits inside a larger selected activity area. Try the intended movements and record their width, length and relevant height. This reference does not prescribe exercise, establish personal clearance or assess heavy equipment.

Keep the cabinet shallow

A rear cabinet stores portable accessories outside the baseline activity reservation. Close doors and put loose gear away before activity. Door operation and retrieval still need a physical check; the floor study does not model cabinet hardware.

Treat the floor as a product choice

The pale timber appearance in the image is a visual direction. It does not identify a sports surface, slip performance, impact resistance or structural floor capacity. Select the actual finish and support for the intended use.

Plan comfort during use

The high side window suggests privacy and daylight. It does not establish ventilation or temperature control. Include use duration, occupancy, local climate and services in the room brief before specifying an enclosure.

Declared facts & assumptions

Nominal exterior class only. All clear dimensions below are authored example inputs, not a product specification.

Usable width: 112 in

planning assumption · Independent authored interior input; not calculated from the nominal shell. [editorial]

Usable depth: 136 in

planning assumption · Independent authored interior input; not a wall-assembly result. [editorial]

Selected clear entry: 36 in

planning assumption · Illustrative planning input; not a minimum requirement. [editorial]

Task reservation width: 84 in

planning assumption · Selected test area; replace with actual movement measurements. [editorial]

Task reservation depth: 84 in

planning assumption · Selected test area; not ergonomic approval. [editorial]

Sources & current resource status

Original assumptions and diagram manifest

ShedBuildPlans · US reference; confirm local conditions · Checked 2026-10-07

Defines this study’s authored geometry and questions; not built-project evidence.

/project-resources/2026-10-07-occupied-v1/editorial-manifest.json