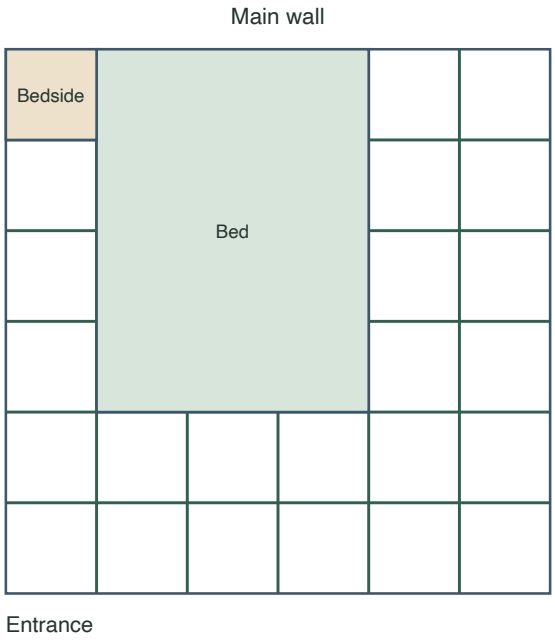
Graph Paper Furniture Cutouts

Answer | Task 1 of 4 | LETTER

Original prompt

Task 1: Draw and cut out a bed footprint 3 squares wide and 4 squares deep, and a bedside table 1 by 1. Place them on a room grid 6 squares wide and 6 squares deep with the main wall along the top edge.

Room and cutout grids use the same 12 mm square on these sheets. Print at Actual Size when using separate sheets.



Answer

Draw the bed as a 3 by 4 rectangle on grid lines and the bedside table as a 1 by 1 square. Cut just outside both outlines and label them. On the 6 by 6 room grid, mark the top edge as the main wall. Place the bed against the top wall, leaving one square free at one side, and set the bedside table in that free square beside the bed's head end. Check that the bed and table do not overlap and that a path at least one square wide remains to the far side of the room.

Reasoning

The bed is drawn 3 wide and 4 deep so it covers 12 squares, and the table covers 1 square. Putting the table in the single free square beside the bed keeps the pair together and leaves the rest of the room open.

Check

Count squares on each cutout to confirm 12 and 1. Confirm the table sits in the one-square gap beside the bed and that a one-square path reaches the far side.

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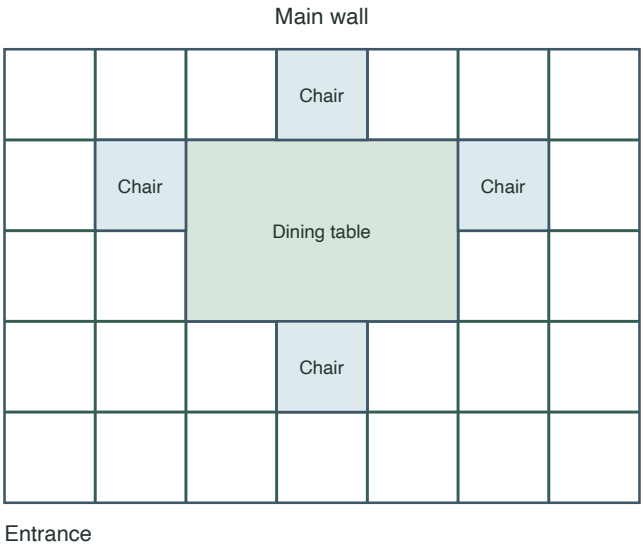
Original prompt

Task 2: Draw and cut out a dining table 3 by 2 squares and four chairs, each 1 by 1. Arrange them on a room grid 7 squares wide and 5 squares deep so each chair touches one side of the table.

Room and cutout grids use the same 12 mm square on these sheets. Print at Actual Size when using separate sheets.



Answer

Draw the table as a 3 by 2 rectangle and four 1 by 1 chair squares. Cut out and label all five pieces. On the 7 by 5 room grid, place the table in the middle. Put one chair against each long side and one against each short side, each touching the table edge. Check that all four chairs touch the table, none overlap, and a path at least one square wide reaches the table from the room entrance.

Reasoning

A 3 by 2 table has four sides, so one chair per side seats four people and each chair touches the table. Centring the table leaves room around it for the chairs and a walkway.

Check

Confirm each chair shares an edge with the table. Count that the table covers 6 squares and each chair 1. Trace a one-square-wide path from the entrance to the table.

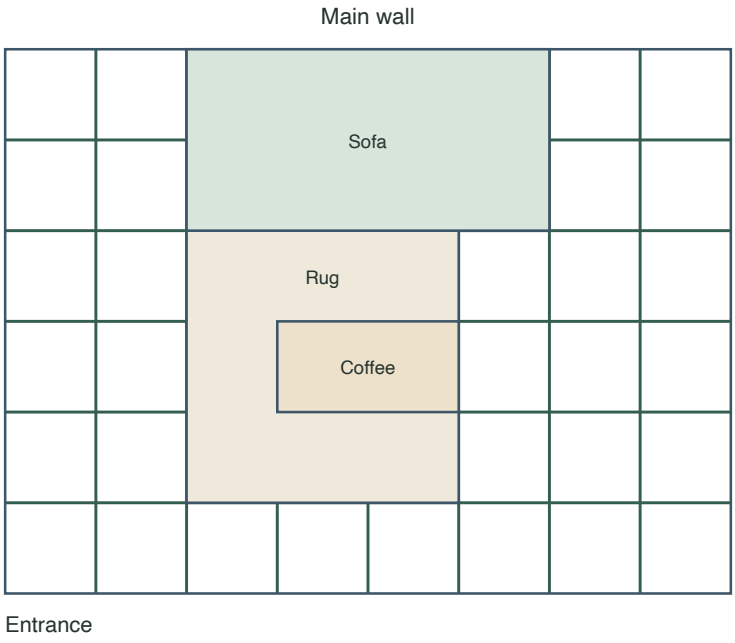
Graph Paper Furniture Cutouts

Answer | Task 3 of 4 | LETTER

Original prompt

Task 3: Draw and cut out a sofa 4 by 2 squares, a coffee table 2 by 1 squares and a rug 3 by 3 squares. Place them on a room grid 8 squares wide and 6 squares deep so the coffee table sits on the rug in front of the sofa.

Room and cutout grids use the same 12 mm square on these sheets. Print at Actual Size when using separate sheets.



Answer

Draw the sofa as a 4 by 2 rectangle, the coffee table as a 2 by 1 rectangle and the rug as a 3 by 3 square. Cut out and label all three. On the 8 by 6 room grid, place the rug near the centre with its edges on grid lines, set the coffee table on top of the rug, and place the sofa against the main wall facing the table with a one-square gap. Check that the table lies fully inside the rug outline and that a path at least one square wide runs past the seating.

Reasoning

The rug is the largest piece and anchors the seating group. Putting the table on the rug and the sofa facing it with a gap creates a readable seating arrangement while keeping a walkway.

Check

Confirm the 2 by 1 table fits inside the 3 by 3 rug with room to spare. Confirm the one-square gap between sofa and table and a one-square path past the group.

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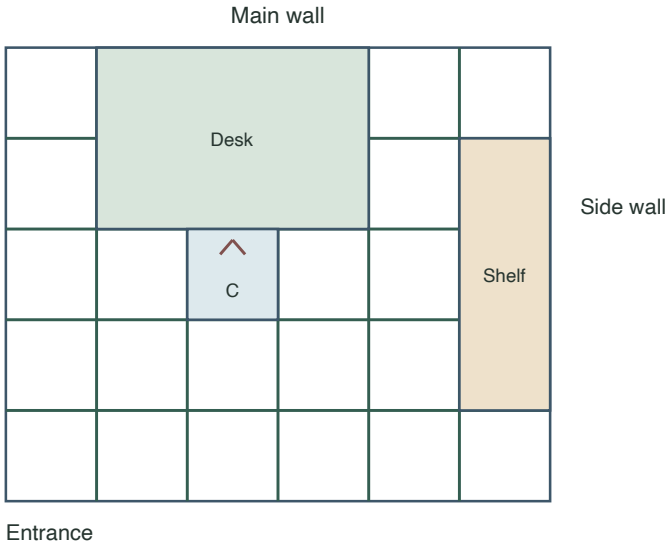
Original prompt

Task 4: Draw and cut out a desk 3 by 2 squares, a chair 1 by 1 and a bookshelf 1 by 3. Place them on a room grid 6 squares wide and 5 squares deep so the desk is against the main wall, the chair faces the desk, and the bookshelf stands against a side wall.

Room and cutout grids use the same 12 mm square on these sheets. Print at Actual Size when using separate sheets.



C marks the chair. Its arrow points toward the desk.

Answer

Draw the desk as a 3 by 2 rectangle, the chair as a 1 by 1 square and the bookshelf as a 1 by 3 rectangle. Cut out and label all three. On the 6 by 5 room grid, mark the top edge as the main wall and one side edge as a side wall. Place the desk against the main wall, set the chair in front of the desk facing it, and stand the bookshelf against the side wall. Check that the chair touches the desk side, the bookshelf does not block the entrance path, and a path at least one square wide reaches the desk.

Reasoning

The desk against the main wall and the chair facing it form a work spot. The tall bookshelf on a side wall keeps the centre open and leaves the entrance path clear.

Check

Confirm the chair shares an edge with the desk and the bookshelf lies along the side wall. Trace a one-square-wide path from the entrance to the desk and confirm the bookshelf does not cross it.