

# Minecraft plans

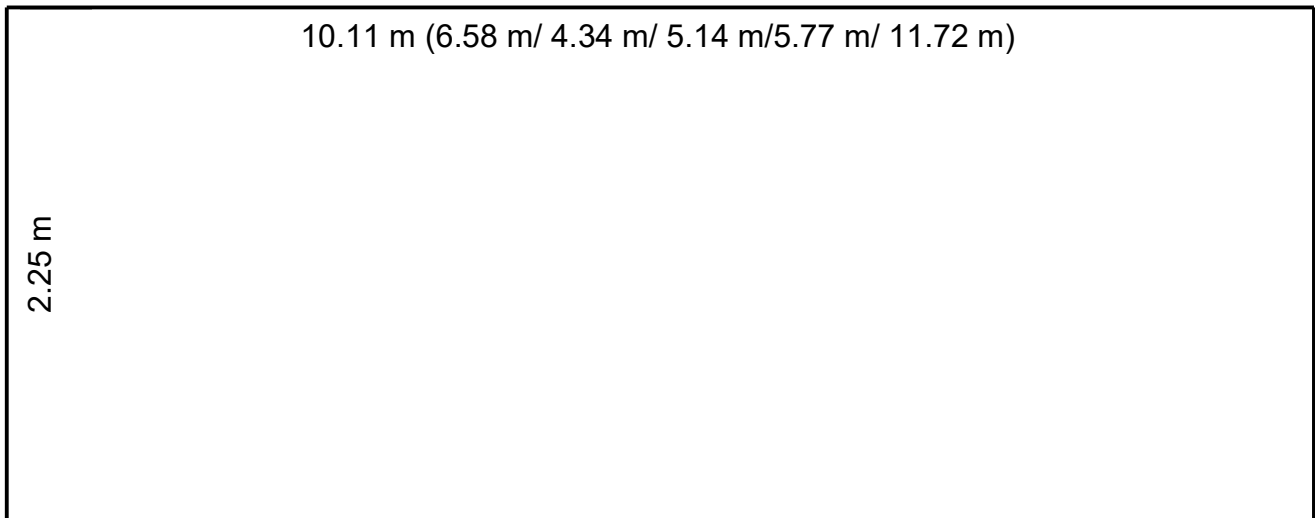
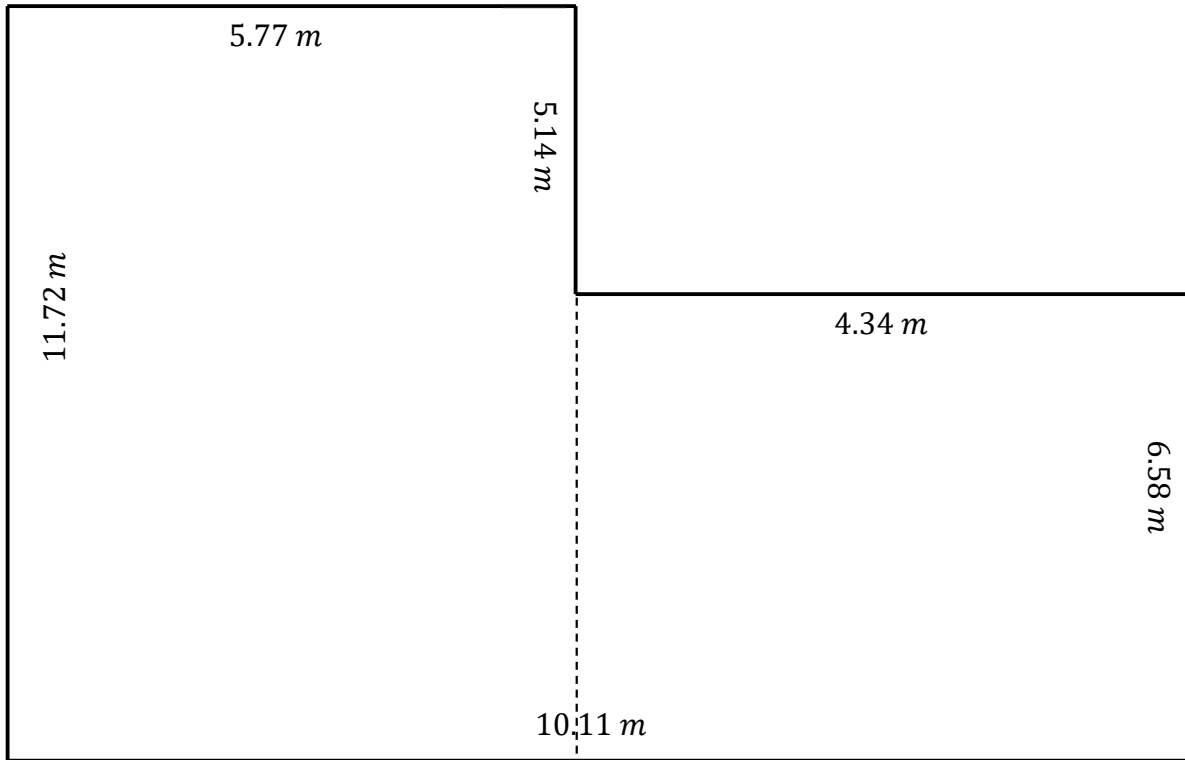
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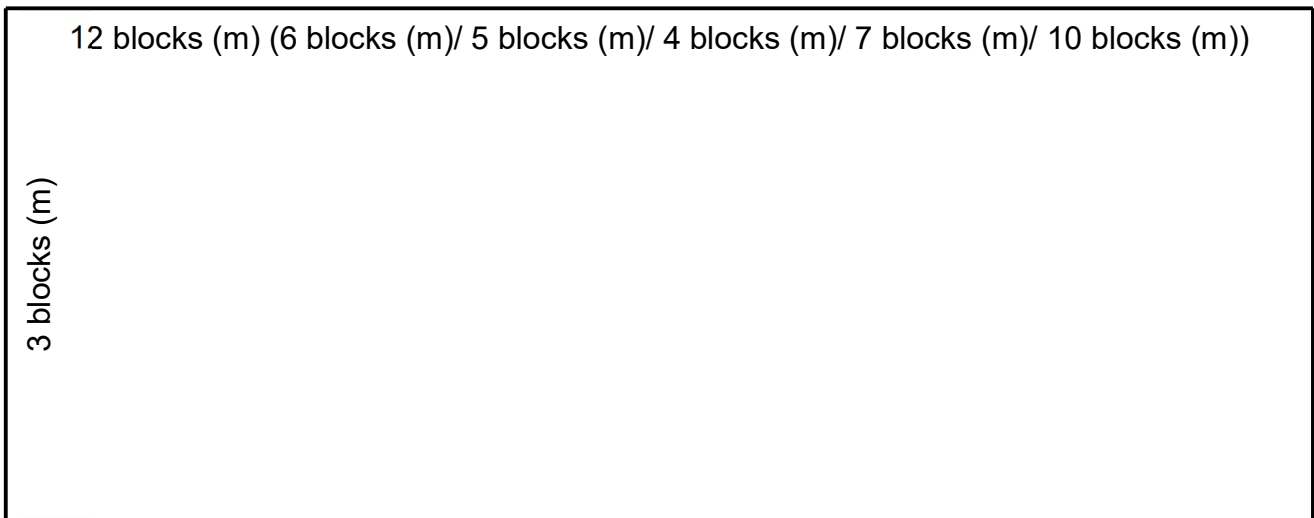
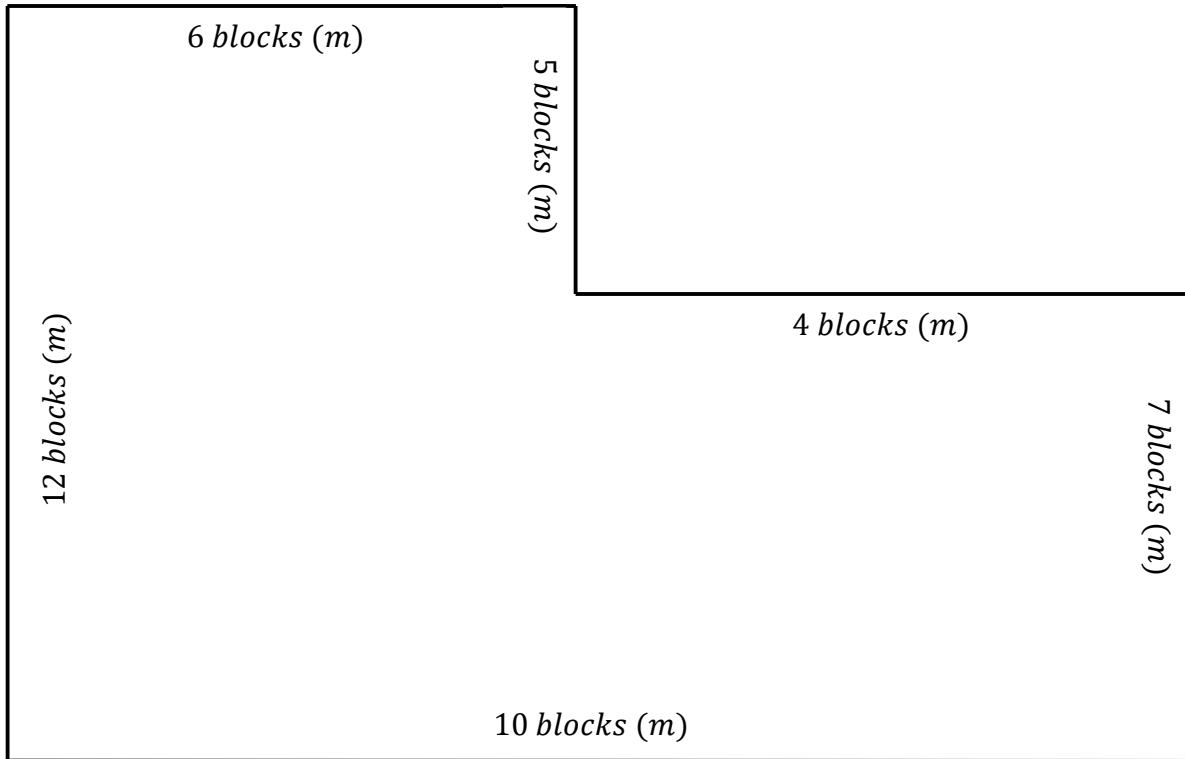
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**Diagrams:**

Actual Room:



Minecraft Room:



**Scale:**Minecraft Scale:

*Scale Statement (SS) = original: model*

$$SS = 10.11 \text{ m} : 10 \text{ blocks}$$

$$SS = 2.022 \text{ m} : 2 \text{ blocks}$$

$$SS = 1.011 \text{ m} : 1 \text{ block}$$

$$\text{Scale Factor (SF)} = \frac{\text{original}}{\text{model}}$$

$$SF = \frac{10.11 \text{ m}}{10 \text{ blocks}}$$

$$SF = \frac{2.022 \text{ m}}{2 \text{ blocks}}$$

$$SF = \frac{1 \text{ block}}{1.011 \text{ m}}$$

$$SF = 1$$

One block is 1 m.

**Surface Area**Actual Room:*Floor/Roof:*

$$11.72(5.77) = 67.62 \text{ m}^2$$

$$3.24(6.58) = 21.32 \text{ m}^2$$

$$67.62 \text{ m}^2 + 21.32 \text{ m}^2 = 88.94 \text{ m}^2$$

*Walls:*

$$2.25(10.11) = 22.75 \text{ m}^2$$

$$2.25(6.58) = 14.81 \text{ m}^2$$

$$2.25(4.34) = 9.77 \text{ m}^2$$

$$2.25(5.14) = 11.57 \text{ m}^2$$

$$2.25(5.77) = 12.98 \text{ m}^2$$

$$2.25(11.72) = 26.37 \text{ m}^2$$

$$22.75 \text{ m}^2 + 14.81 \text{ m}^2 + 9.77 \text{ m}^2 + 11.57 \text{ m}^2 + 12.98 \text{ m}^2 + 26.37^2 = 98.25 \text{ m}^2$$

**Total Surface Area:**

$$2(88.94 \text{ m}^2) + 98.25 \text{ m}^2 = 276.13 \text{ m}^2$$

**Minecraft Room:**

**Floor/Roof:**

$$6(12) = 72 \text{ blocks}^2$$

$$4(7) = 28 \text{ blocks}^2$$

$$72 \text{ blocks}^2 + 28 \text{ blocks}^2 = 100 \text{ blocks}^2$$

**Walls:**

$$3(12) = 36 \text{ blocks}^2$$

$$3(6) = 18 \text{ blocks}^2$$

$$3(5) = 15 \text{ blocks}^2$$

$$3(4) = 12 \text{ blocks}^2$$

$$3(7) = 21 \text{ blocks}^2$$

$$3(10) = 30 \text{ blocks}^2$$

$$36 \text{ blocks}^2 + 18 \text{ blocks}^2 + 15 \text{ blocks}^2 + 12 \text{ blocks}^2 + 21 \text{ blocks}^2 + 30 \text{ blocks}^2 = 132 \text{ blocks}^2$$

**Total Surface Area:**

$$2(100 \text{ blocks}^2) + 132 \text{ blocks}^2 = 332 \text{ blocks}^2$$

**Volume**

**Actual Room:**

$$2.25 \text{ m} (11.72 \text{ m})(5.77 \text{ m}) = 152.15 \text{ m}^3$$

$$2.25 \text{ m}(6.58 \text{ m})(4.34 \text{ m}) = 64.25 \text{ m}^3$$

$$152.15 \text{ m}^3 + 64.25 \text{ m}^3 = 216.4 \text{ m}^3$$

**Minecraft Room:**

$$3(12)(6) = 216 \text{ blocks}^3$$

$$3(4)(7) = 84 \text{ blocks}^3$$

$$216 \text{ blocks}^3 + 84 \text{ blocks}^3 = 300 \text{ blocks}^3$$

**Cost:**Flooring:

At, [www.lowes.ca](http://www.lowes.ca), AHF Commercial Vinyl Floor Tile - 12-in x 12-in - Speckled White

Each VFT is  $0.09 \text{ m}^2$

$$\frac{100 \text{ m}^2}{0.09 \text{ m}^2} = 1,111.11 \approx 1,112$$

For one VFT: \$125.55 (not including taxes)

$$\$125.55 \times 1,112 = \$139,611.60$$

Roof:Tiles:

Each Carton has a squared meter of  $5.95 \text{ m}^2$

$$\frac{100 \text{ m}^2}{5.95 \text{ m}^2} = 16.81 \text{ carton} \approx 17 \text{ cartons}$$

At, [www.lowes.ca](http://www.lowes.ca), for a carton of roofing: \$79.99 (not including taxes)

$$\$79.99 \times 17 = \$1,359.83$$

Lights:

There are 8 lights in the Minecraft room.

At, [homedepot.ca](http://homedepot.ca), **BOOST LIGHTING** 4 ft. LED Shop Light 48W 4000K Warm Daylight 5500 Lumens Heavy Duty Linkable is \$69.99 (not including taxes)

$$8 \times \$69.99 = \$559.92$$

Walls (3 m):4 blocks (m) wall:

The door is  $2 \text{ m} \times 1 \text{ m} = 2 \text{ m}^2$

$$4(3) - 2(1) = 10 \text{ m}^2$$

10 blocks (m) wall:

The door is  $2 \text{ m} \times 1 \text{ m} = 2 \text{ m}^2$

$$10(3) - 2(1) = 28 \text{ m}^2$$

5 blocks (m) wall:

$$5 \times 3 = 15 \text{ m}^2$$



7 blocks (m) wall:

$$7 \times 3 = 21 m^2$$

6 blocks (m) wall:

We have  $2 \times 2 = 4 m^2$  glass section on this wall.

$$3(6) - 2(4) = 18 - 8 = 10 m^2 \text{ wall}$$

12 blocks (m) wall:

We have  $1 \times 2 = 2 m^2$ ,  $3 \times 1 = 3 m^2$  glass sections on this wall.

$$3(12) - (2 + 3(1)) = 36 - 5 = 31 m^2 \text{ wall}$$

Glass:

$$3(4 m^2) + 3(2 m^2) = 12m^2 + 6m^2 = 18 m^2$$

At, [homedepot.ca](https://www.homedepot.ca), Optix Clear Acrylic Sheet is \$33.97 (not including taxes)

$$18 \text{ in} \times 24 \text{ in} = 432 \text{ in}^2$$

$$\frac{432}{x} = \frac{1}{0.0254}$$

$$0.2787m^2$$

$$\frac{18 m^2}{0.2787 m^2} = 64.6 \text{ sheets} \approx 65 \text{ sheets}$$

$$65 \times \$33.97 = \$2,208.05$$

Doors:

At, [homedepot.ca](https://www.homedepot.ca), **Masonite** 32-inch x 80-inch Primed 2 Panel Hollow Core Smooth Interior Door Slab is \$142.00 *each* (not including taxes)

$$2 \times \$142.00 = \$284.00$$

Walls:

$$10 m^2 + 28 m^2 + 15 m^2 + 21 m^2 + 10 m^2 + 26 m^2 = 110 m^2$$

At, [homedepot.ca](https://www.homedepot.ca), **CGC Sheetrock** 1/2 in. x 4 ft. x 8 ft. UltraLight Drywall Panel is \$17.94 *each* (not including taxes) and a 10% discount if you buy 50 or more.

$$4(8) = 32 ft^2$$

$$32 ft^2 \left( \frac{1ft}{0.3048m} \right) = 344.45 m^2$$

$$\frac{344.45 m^2}{110 m^2} = 3.131 \text{ panels} \approx 4 \text{ panels}$$

$$\$17.94 \times 4 = \$71.76$$

Tables, Chairs, Bookshelf, and a Standing Desk:*11 tables and 20 chairs:*

At, [www.tradewest.ca](http://www.tradewest.ca), the tables are \$199.00 and the chairs are \$82.99 (Not including taxes)

$$\$199.00 \times 11 = \$2,189.00$$

**10 tables have 2 chairs.**

20 chairs

$$\$82.99 \times 20 = \$1,659.80$$

*1 bookshelf:*

At, [www.tradewest.ca](http://www.tradewest.ca), the bookshelves are \$529.00 (Not including taxes)

$$\$529.00 \times 1 = \$529.00$$

*1 standing desk:*

At, [www.tradewest.ca](http://www.tradewest.ca), the standing desks are \$269.00 (Not including taxes)

$$\$269.00 \times 1 = \$269.00$$

Total Cost:

$$\$139,611.60 + \$1,359.83 + \$559.92 + \$2,208.05 + \$284.00 + \$71.76 +$$

$$\$2,198.00 + \$1,659.00 + \$529.00 + \$269.00 = \$148,750.16$$

So, the total cost is \$148,750.16

**Loan:**

So, I need a loan of \$150,000.00.

If I pay \$10,000.00 each month how long, it will take me to repay the loan if it has an interest rate of 3.00%. If I paid \$100,000.00, in twenty-two months so far how many more month will it take me to repay the loan?

$$\$150,000.00 - \$100,000.00 = \$50,000.00$$

$$I = Prt$$

$$\$50,000.00 = (\$150,000)(0.03)t$$

$$\$50,000 = \$4,500t$$

$$\frac{\$50,000.00}{\$4,500.00} = \frac{\$4,500.00}{\$4,500.00}t$$

$$11.11 = t$$

$$t \approx 12 \text{ months.}$$

In total it took me 44 months to repay the loan. It costed \$440,000 to create this room.