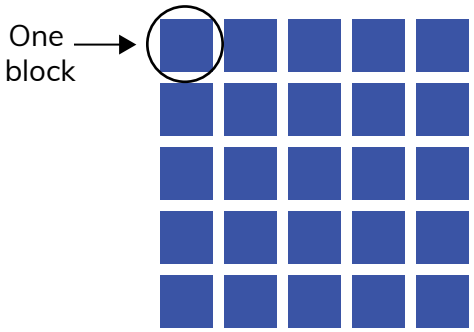
Measure area through tiling and counting unit squares (sq cm, sq m, sq in, sq ft and improvised units) CCSS.MATH.CONTENT.3.MD.C.7.a | US_EN_03_MAT_C21_WS_m1

The creators loved the final level of Pixel Land that you designed. Now, they want you to design of a gaming machine.

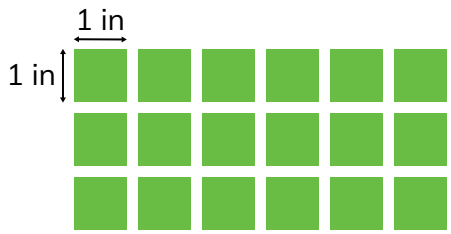
1 The space for the buttons is square-shaped. How many buttons are needed if 1 button covers 1 block? Write your answer in the boxes given below.



Area for the buttons

☐ Number of rows × ☐ Number of blocks in a row = ☐ Blocks

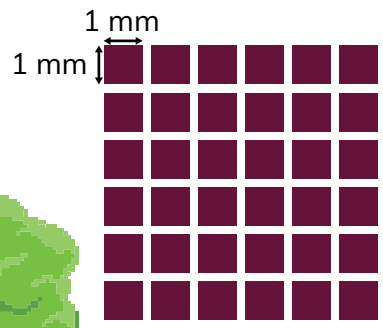
2 Find the area of the rectangular space required to put a sticker on the machine. Check ✓ the correct box.



Area for the sticker

☐ 20 sq in ☐ 18 sq in ☐ 16 sq in

3 Find the square-shaped area needed for the joystick. Circle the correct option.

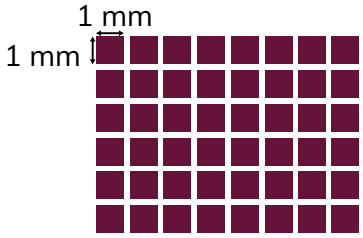


Area for the joystick

25 sq mm 35 sq mm 36 sq mm

Measure area through tiling and counting unit squares (sq cm, sq m, sq in, sq ft. and improvised units) CCSS.MATH.CONTENT.3.MD.C.7.a | US_EN_03_MAT_C21_WS_m1

4 Find the area needed for the front poster. Write your answer in the boxes given below.



Area for the front poster

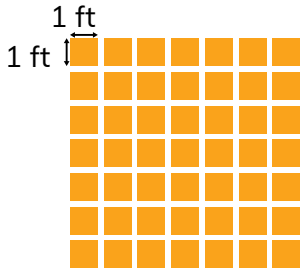
Area of 1 unit block = ☐ sq mm

Area of the front poster = ☐ × ☐

Number of blocks in a row | Number of rows

= ☐☐ sq mm

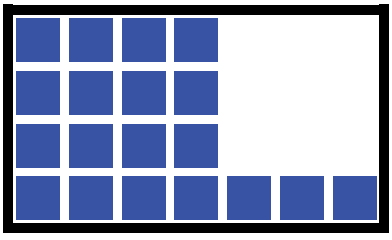
5 Find the area needed for the back poster. Circle the correct option.



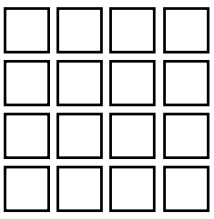
Area for the back poster

36 sq cm | 36 sq ft | 49 sq cm | 49 sq ft

6 Color the number of unit squares **blue** to complete the area needed for the screen.



Area for the screen

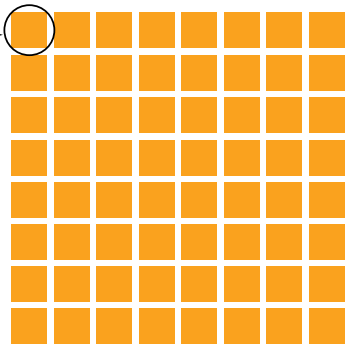


Measure area through tiling and counting unit squares (sq cm, sq m, s in, sq ft and improvised units) CCSS.MATH.CONTENT.3.MD.C.7.a | US_EN_03_MAT_C21_WS_m1

Now that the plan is ready, let's design the parts of the machine.

1 Design the main board by finding the number of blocks needed for the board. Write your answer in the boxes given below.

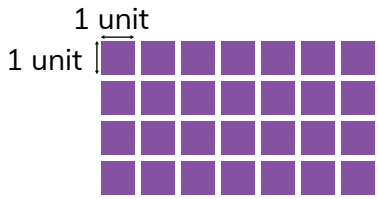
One block →



Area for the main board

☐ Number of columns × ☐ Number of blocks in a columns = ☐ Blocks

2 Place the screen in the machine by finding the area needed for the screen. Check ☑ the correct box.



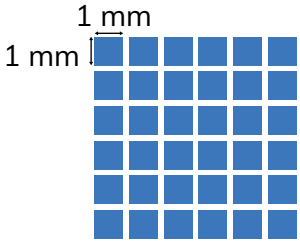
Area for the screen

☐ 30 sq units ☐ 21 sq units ☐ 28 sq units

The total area can also be obtained by counting the total number of unit squares. Circle the correct option.

Yes No

3 How many buttons will cover the given area, if each button covers 1 sq mm. Circle the correct number of buttons.

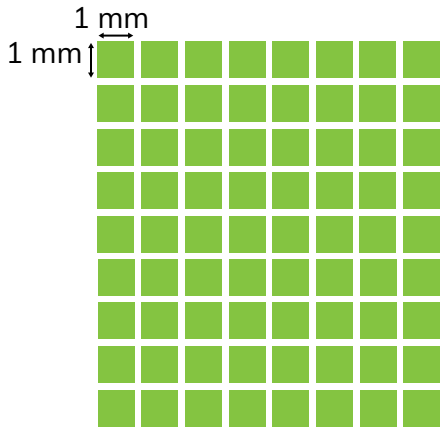


Area for the buttons

25 buttons 36 buttons 40 buttons

Measure area through tiling and counting unit squares (sq cm, sq m, sq in, sq ft and improvised units) CCSS.MATH.CONTENT.3.MD.C.7.a | US_EN_03_MAT_C21_WS_m1

4 Place the score display by finding the area needed for the display. Check ☑ the correct box.



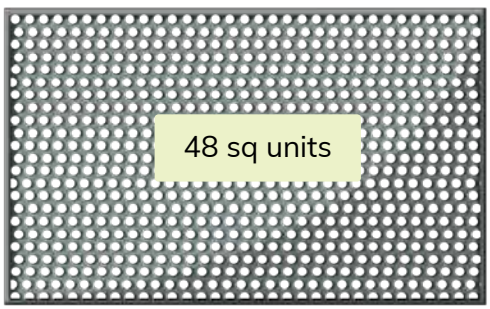
☐ 72 sq mm ☐ 81 sq mm ☐ 76 sq mm

The rows and columns of the score display have an unequal number of blocks. Circle the correct option.

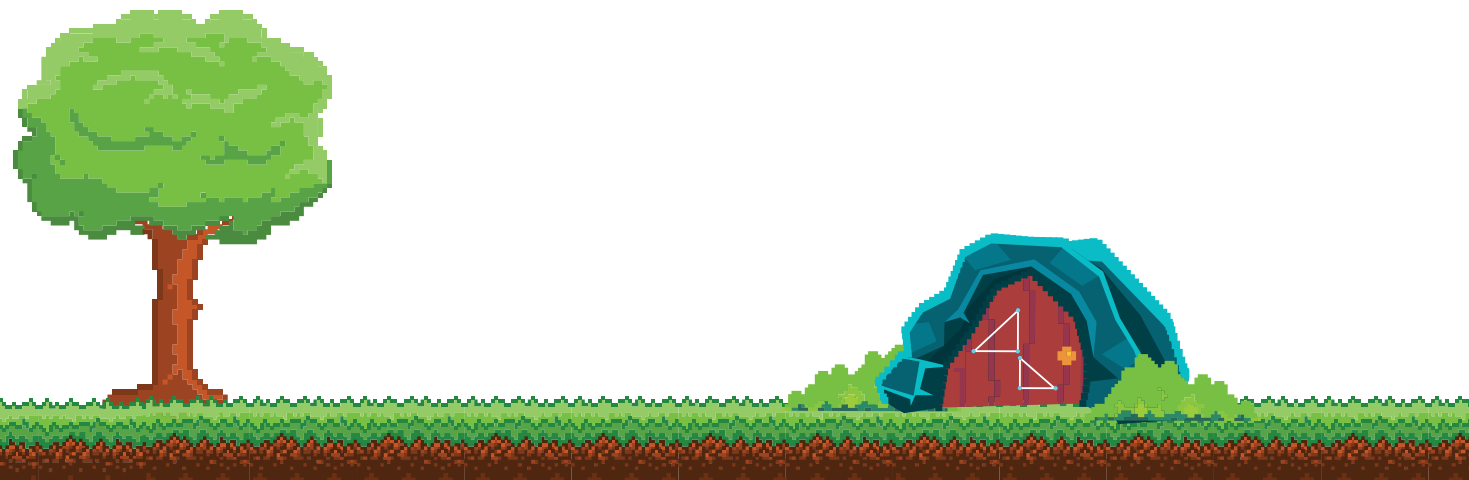
Yes No

5 Place the rectangle-shaped top cover of the machine by matching the given lengths and widths correctly. The area of the cover is 48 sq units.

Hint: You should get 48 upon multiplying the length and width.



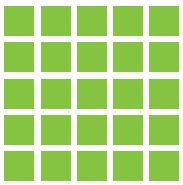
Length	Width
16 units ●	● 6 units
12 units ●	● 3 units
8 units ●	● 4 units

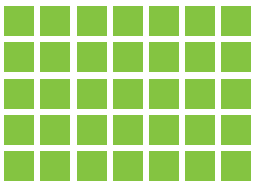


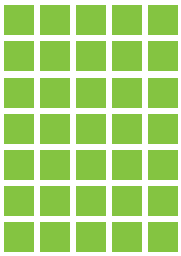
Measure area through tiling and counting unit squares (sq cm, sq m, sq in, sq ft and improvised units) CCSS.MATH.CONTENT.3.MD.C.7.a | US_EN_03_MAT_C21_WS_m1

Now, the creators want you to make a new gaming machine for Pixel Land. Let's do that.

Check ✓ any area of your choice for the joystick from the given options.







Color the boxes **red** to represent the number of blocks in a row in the area selected above.

Color the boxes **blue** to represent the number of rows in the area selected above.

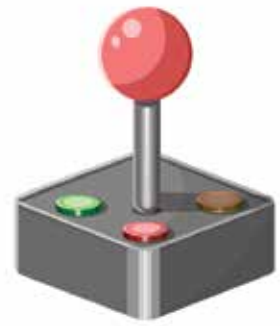
Find the area needed for the joystick if each unit block has 1 sq unit of area. Write your answer in the boxes given below.

Area = ☐ × ☐

Number of blocks in a row

Number of rows

= ☐☐ sq units



Measure area through tiling and counting unit squares (sq cm, sq m, sq in, sq ft and improvised units) CCSS.MATH.CONTENT.3.MD.C.7.a | US_EN_03_MAT_C21_WS_m1

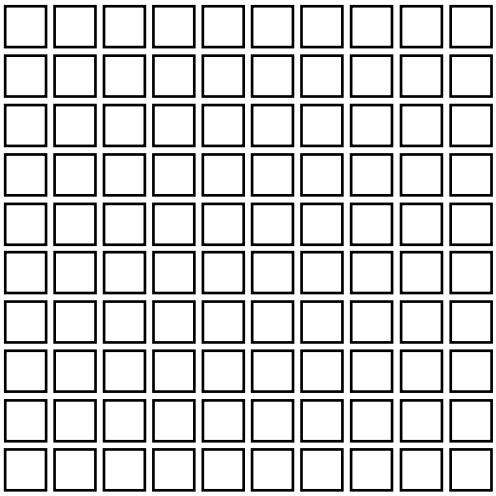
Choose the area for the main board by selecting the number of unit blocks in a row, and column. Write your answers in the boxes given below.

- The unit blocks in a row, and column should be between 5 and 9.

Number of unit blocks in a row

Number of units blocks in a column

Color the number of blocks selected above **black**.



Find the area needed for the joystick if each block has an area of 1 sq unit. Write your answer in the boxes given below.

sq units

Area needed for the main board

Which of the following part requires more area? Circle the correct option.

Main board

Joystick

Well done, the game machine is ready. The creators love it!