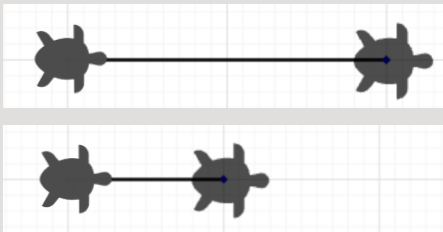


Moving the Turtle - Turtle Geometry



You can change the position of the turtle with the blocks from the blue **Motion** category.

The move block moves the turtle **in the direction that it's currently** facing. The **distance** of the movement can be adjusted with the **input**.



move 100 steps

move 50 steps

The black line represents the thread of the embroidery. The blue diamonds are stitches.

Try to combine the move block with the turn and repeat block to create interesting repetitive shapes.

You can always keep track of the turtle's current position by **checking the box** in front of the x position and y position blocks **in the palette**.

This will show a **watcher** with the coordinates **on the stage**.

5

10

x position

y position

☒ x position

☒ y position

| | |
|-------------------|----|
| Sprite x position | 5 |
| Sprite y position | 10 |

Moving the Turtle - Coordinates



go to random position ▼

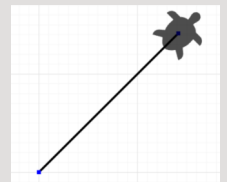
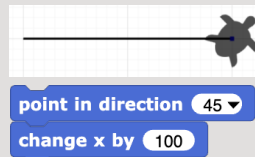
go to x: 0 y: 0

You can make the turtle go to **absolute coordinates** using the **go to** blocks.

You can **set and change** the **x and y coordinate** separately with these blocks.

The **set** block transfers the turtle to an **absolute** coordinate.

The **change** block changes the position of the turtle **based on the current coordinates**.



set x to 0

set y to 0

change x by 10

change y by 10

These blocks are very useful, if you want to move the turtle to a **specific position**. However, **avoid** this way of programming, **if you want to create repetitive shapes in different directions**. It is very hard to calculate the correct coordinates for each orientation.

Try using the move and turn blocks with relative orientation for these projects.