Lesson 5: Advanced Shapes Extras Point and Line

Lesson aim:

We will be learning how to use the functions for point() and line() - these are similar to ellipse() and rect(), with a couple of small but important differences!

Extra section: Point and line!

Here we introduce two more functions: **point()** and **line()**.
Guess what they do:

point() - _____

line() - _____

Copy the following example on your computer and see if you were right:

```
size(400,400);
strokeWeight(10); //← this is needed - we will explain it later
point(150,100);
point(250,100);
```

point() is different to the other shape functions we've done so far in that it only takes **two** numbers; _position from left_ and _position from top_, as a point has no width or height.

line() is also different. Instead of describing it as position (parameter one and two) and size (parameter three and four), we describe the position of the start (parameter one and two) and the end (parameter three and four). If we want to make the line thicker we use the strokeWeight() function, as in the example below.

Lets try this out. Make two points, as below:

```
size(400,400);
strokeWeight(10); // this makes the points big enough to see
point(75,75);
point(325,325);
```

Now let's try that again (using exactly the same two positions, but not in two point() functions, but in one line() function. Lets try that:

```
size(400,400);
strokeWeight(10);
line(75,75,325,325); //← same numbers as above!
```

As we can see we have two points, and we drew a line from one (the start) to the other (the end).

Tasks:

1. Use the **point**() function to create four dots outlining a square. (See below left)
2. Use these positions to draw lines in the shape of a cross (like we did in the example above.) See below right.
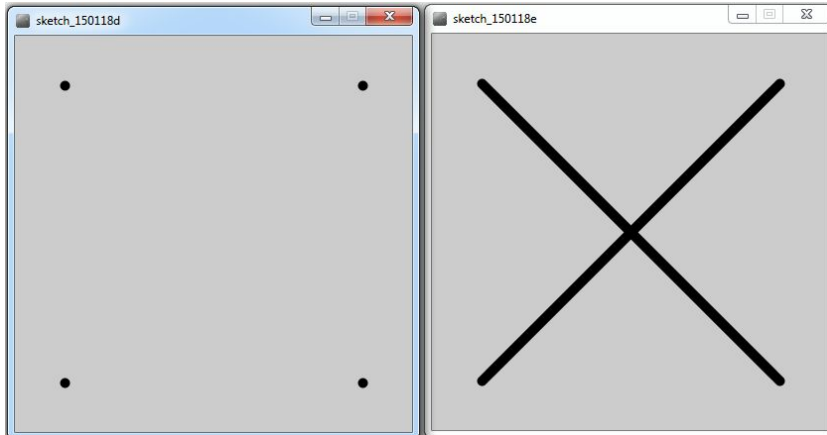
3. Add four more points (see below left)
4. Use these points as start and end of two more lines to make a star. (see below right)
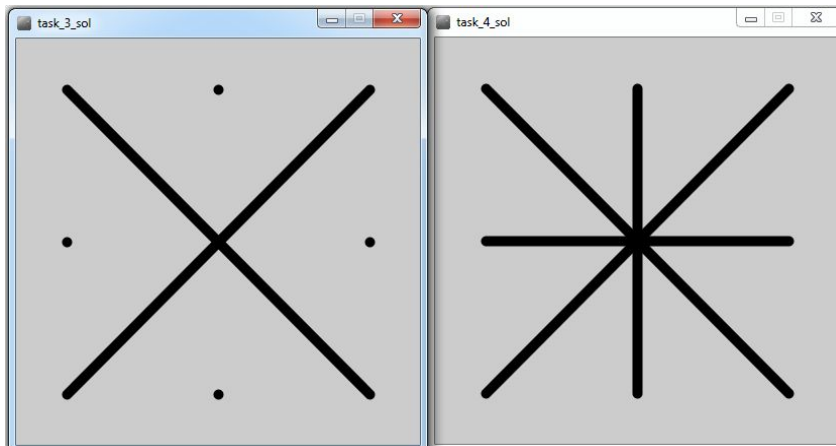
5. Open a new project, and use **point**(), **line**() and an **ellipse**() to make a stickman. (See right)
6. Use points and lines to make a face.
7. Add this face to the stick man.