

## 5.1 - Frame Rate - Setup and Draw

### Frame Rate - FPS

By default, frames are drawn on the screen 60 times (frames) per second (fps). The `frameRate()` function changes the number of frames displayed each second. The program will always attempt to run at the speed set by the number in the `frameRate()` function. The `frameRate()` function controls only the maximum frame rate, it can not speed up a program that runs slowly because of the speed of the computer.

#### Example!

```
void setup() {  
  size(600, 600);  
  frameRate(5);  
}  
  
void draw() {  
  ellipse(mouseX, mouseY, 100, 100);  
}
```

#### Quick tasks:

1. Type the example on the last page into Processing and save it (the filename should start with "Lesson5\_1").
2. Change the program so the fps is faster.
3. Add the function `background()` to draw. What happens to the circle?
4. Make the circle change to a random colour each frame with the `fill()` function.
5. Add a target like the one in lesson 1.
  - a. Make each ring of the target change to a random colour each frame.
6. Make the background change to a random colour.