

*Start with a new sketch that contains setup() and draw() methods. Ask your teacher if you don't know how to do this. The suggestions under each step should help you with your program.*

**1. Make a canvas for your game.**

```
size(width, height)           //in setup method
background(red, green, blue)   //in draw method
```

**2. Draw a ball on the screen.**

```
ellipse(x, y, width, height)   //in draw method
fill(red, green, blue)         //in draw method
stroke(red, green, blue)        //in draw method
```

**3. Make the ball move across the screen (left to right).**

//make a variable for the ball's X position and change it in the draw method.

**4. Change the speed of the ball.**

//make a variable for the speed of the ball in the X direction (from left to right).

//changing this variable should change the speed of your ball

**5. Make the ball bounce off of the walls.**

```
if(x > width){
    xSpeed = -xSpeed;
}
```

**6. Do the same in the Y (up and down) direction.**

```
height
```

**7. Add a background image for your game.**

```
PImage backgroundImage;           //at the top of your
sketch
backgroundImage = loadImage("image.jpg"); //in the setup method
image(backgroundImage, 0, 0);         //in draw method
image(backgroundImage, 0, 0, width, height); //if you want to resize
```

**8. Draw a paddle at the bottom of the screen**

```
rect(x, y, width, height);
```

**9. Make the paddle move over and back with the mouse.**

```
mouseX
```

**10. Make the ball change Y direction when it hits the paddle. Figure it out by yourself, or use this method:**

```
boolean intersects(int ballX, int ballY, int paddleX, int paddleY,
int paddleLength) {
    if (ballY > paddleY && ballX > paddleX && ballX < paddleX +
paddleLength)
        return true;
    else
        return false;
}
```