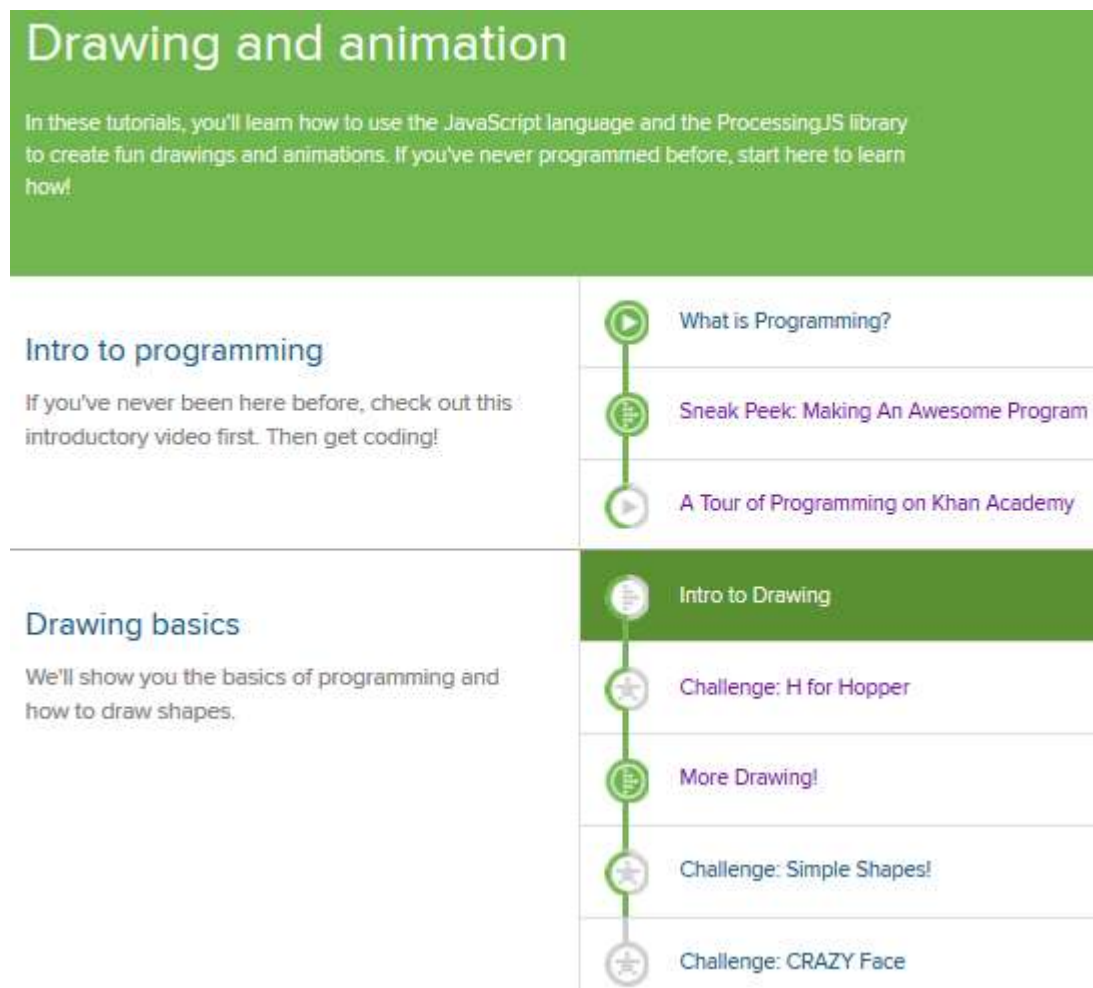


Zadanie 2

Naucz się programowania grafiki w Akademii Khana

W czasie lekcji oglądaliście film **What is Programming?** (Co to jest programowanie? 2,5 min), a następnie prezentację możliwości środowiska **Sneak Peek: Making An Awesome Program** (Zapowiedź: Tworzenie niesamowitego programu, 7,5 min).



Drawing and animation

In these tutorials, you'll learn how to use the JavaScript language and the ProcessingJS library to create fun drawings and animations. If you've never programmed before, start here to learn how!

Intro to programming

If you've never been here before, check out this introductory video first. Then get coding!

- What is Programming?
- Sneak Peek: Making An Awesome Program
- A Tour of Programming on Khan Academy

Drawing basics

We'll show you the basics of programming and how to draw shapes.

- Intro to Drawing
- Challenge: H for Hopper
- More Drawing!
- Challenge: Simple Shapes!
- Challenge: CRAZY Face

Pora na samodzielną naukę programowania w Akademii Khana. Wejdź na stronę <https://www.khanacademy.org/cs/programming>. Obejrzyj film A Tour of Programming on Khan Academy (Wycieczka po programowaniu w Akademii Khana). Przejdź do następnego działu Drawing Basics (Podstawy rysowania) i przerób wszystkie tematy, które do niego należą.

Rozwiązanie

Zacznij od interaktywnego filmu Intro to Drawing (Wprowadzenie do rysowania). Następnie przerób ćwiczenie Challenge: H for Hopper (Ćwiczenie: H dla Hoppera). Będziesz w nim wpisywać polecenia graficzne objaśnione na filmie.

Challenge: H for Hopper 379 Votes [Vote Up](#) [Share](#)

Working on Step 2 of 3

Brilliant!
Ready for more?
[Next Step!](#)

Now, the right side. [\(Help\)](#) **Hint** [\(What's this?\)](#)

For the right side of the H, we want a rectangle that's exactly the same as the left side, except for the x position. Not sure how to get started? You could just copy the same code that you wrote for step 1, and then try changing the x (the first number) until the second rectangle is on the right hand side.

```
rect(80,70,60,240);  
rect(240,70,60,240);
```

```
rect(80, 70, 60, 240);  
rect(____, 70, 60, 240);
```

Umiesz już rysować prostokąty. Obejrzyj interaktywny film More Drawing! (Więcej rysowania). Przygotuje on cię do dwóch kolejnych ćwiczeń. Masz teraz do wykonania ćwiczenie Challenge: Simple Shapes (Ćwiczenie: Proste kształty).

Challenge: Simple Shapes!

267 Votes [Vote Up](#) [Share](#)

Working on Step 4 of 5

Time to draw your own shapes! Let's go over them here before jumping into more awesome programs.

What about a perfect circle?


[Help](#) **Hint** [What's t](#)

Add another ellipse() that forms a perfect circle. Remember that a perfect circle has its width equal to its height, so be sure to use exactly the same number twice when you say 'ellipse' – whatever you put in those colored squares, be sure it is exactly the same!

ellipse(.....)

Making progress!
Great things are ahead!

[Next Step!](#)



```
rect(10,20,100,150);
rect(120,20,100,150);
ellipse(200, 200, 100,150);
ellipse(320, 200, 100,100);
```

Na koniec masz do zrobienia Challenge: CRAZY Face (Ćwiczenie: Zwariowane oblicze).

Challenge: CRAZY Face

Let's make this face CRAZY! All we have to do is use what we learned about ellipses in Intro to Drawing.

490 Votes

Vote Up

Share

All Steps Complete!



CRAZY face!

Finish up your face by changing the first ellipse(), the one that draws the face outline. Move it around by changing the first two numbers and change the size by changing the last two numbers. Go CRAZY!

[Help](#) **Hint** [What's this?](#)

```
ellipse( , , , , );
ellipse(160, 170, , , );
ellipse(235, 170, , , );
ellipse(195, 245, , , );
```

Great job!

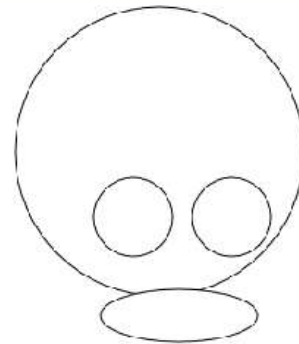
Finish!



```
var r=60;
ellipse(180, 120, 220, 220); // Makes the face

ellipse(160, 170, r, r); // Makes the eye
ellipse(235, 170, r, r); // Makes the other eye

ellipse(195, 245, 120, 40); // Makes the mouth
```



Czas realizacji

30 minut