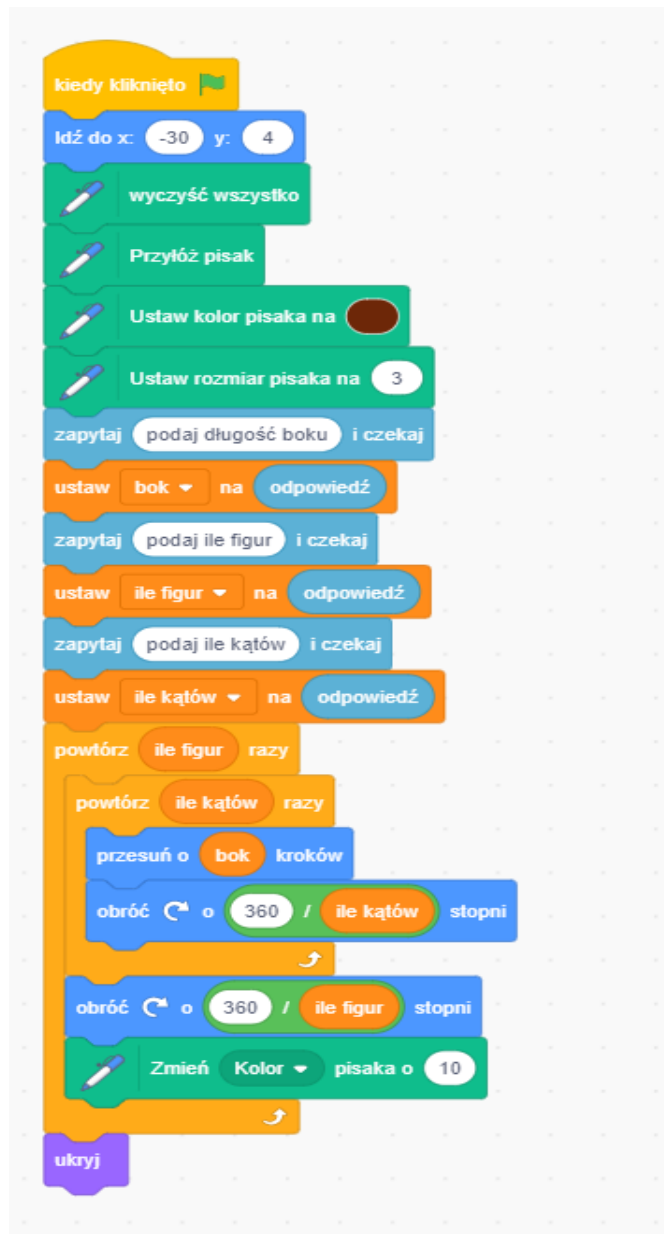


SCENARIO		
<b>Title</b>	Drawing polygons.	
<b>Summary</b>	The student will be able to recognize and name polygons. Familiar with the statements about the sum of the polygon's internal angles. Learn to draw these polygons.	
<b>Author/s</b>	Renata Jasińska, Alicja Radziwon	Date: 03/12/2019

Didactic objectives		
<p>Lesson aims Student:</p> <p>names and draws polygons with the given name;  indicates and counts diagonals in a polygon;  applies the theorem of the sum of the angles of a triangle;  uses the knowledge of the sum of angles in a quadrangle in tasks;  solves tasks using polygon properties;  understands and interprets relevant mathematical concepts, knows the basic terminology;  reads and understands simple text containing numerical information.  distinguishes between figures circle and circle;  uses a compass - draws circles and circles;  distinguishes in the circle and circle the center, radius, diameter and chord;  applies the relationship between the radius and diameter of the circle and the circle;  uses circle and circle messages in tasks.</p>		
Physics <input type="checkbox"/> Mathematics <input checked="" type="checkbox"/> Information <input type="checkbox"/> Technology <input type="checkbox"/> Robotics <input type="checkbox"/> Programming <input type="checkbox"/>		
Education Level:                    10-12years <input checked="" type="checkbox"/> 12-14years <input type="checkbox"/>		
Problem Statement		
What characterizes a polygon? What polygon is a regular polygon? What is the wheel? What is the difference between a polygon and a circle?		
BOM (Bill Of Materials needed)		
Computer workstations, scratch software		
Activity description		
<ol style="list-style-type: none"> <li>1. Organizational activities</li> <li>2. Reminder of shapes of various geometric figures.</li> <li>3. We introduce new important concepts: the internal angle of the polygon, names of polygons and their diagonals, the sum of measures of the internal angles of the triangle and quadrangle.</li> <li>4. Calculation of the internal angle measure of a regular polygon.</li> <li>5. Work with the scratch program</li> </ol>		

## 6. Summary

Sample script and the appearance of the scene  
Script for a polygon



```
whenClickedFlagClicked
  go to x: -30 y: 4
  erase everything
  bring the pen tool to the front
  set the pen color to brown
  set the pen size to 3
  ask "podaj długość boku" and wait
  set "bok" to "answer"
  ask "podaj ile figur" and wait
  set "ile figur" to "answer"
  ask "podaj ile kątów" and wait
  set "ile kątów" to "answer"
  repeat (ile figur) times
    repeat (ile kątów) times
      move "bok" steps
      turn "360 / ile kątów" degrees
    end
    turn "360 / ile figur" degrees
    change the pen color by 10
  end
  hide
```

Magic Wand: bok 20  
Magic Wand: ile figur 5  
ile kątów 3



Or

kiedy kliknięto 

ukryj

wyczyść

podnieś pisak

idź do x: -200 y: 0

przyłóż pisak

ustaw rozmiar pisaka na 5

ustaw kolor pisaka na 

idź do x: -150 y: 100

idź do x: -100 y: 0

idź do x: -200 y: 0

podnieś pisak

idź do x: 0 y: 0

przyłóż pisak

ustaw kolor pisaka na 

idź do x: 100 y: 100

idź do x: 200 y: 100

idź do x: 100 y: 0

idź do x: 0 y: 0

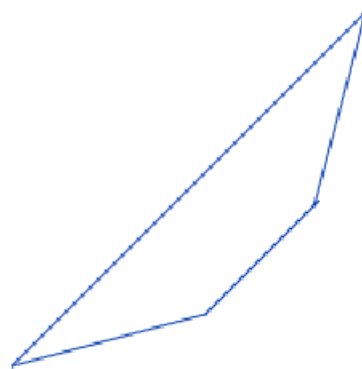
podnieś pisak

idź do x: 100 y: -100

pokaż

Or

```
kiedy kliknięto
wyczyść wszystko
Idź do x: 0 y: 0
Przyłóż pisak
Ustaw kolor pisaka na [niebieski]
przesuń o 80 kroków
obróć o 30 stopni
przesuń o 100 kroków
obróć o 150 stopni
przesuń o 250 kroków
obróć o 150 stopni
przesuń o 100 kroków
pomyśl Hmm... przez 5 sekund
powiedz trapez przez 2 sekund
Podnieś pisak
przesuń o 600 kroków
```



Or

The image shows a Scratch script on the left and a stage view on the right. The script starts with a 'when clicked' event, followed by 'set size to 100%', 'erase everything', 'pick up the pen', 'go to random position', 'bring the pen close', 'set pen color to orange', and a series of 'move' and 'turn' blocks that draw a parallelogram. The final blocks are 'say "równoległobok" for 2 seconds' and 'hide'.

The stage view shows a light blue sky and green hills at the bottom. A yellow parallelogram is drawn in the center of the sky.

### Resources

Drawings of polygons, circles, charts dividing the polygon into triangles.

### Students' Evaluation

Commitment, correct, executing commands, activity

### Bibliography

Available mathematics school textbooks, workbooks, task sets. Just those with whom the class works.

### Scalability

Increasing the number of sides in a polygon,

### More information

Drawing wheels.