

BSCS 514-Computer Graphics



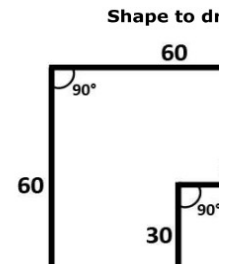
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Examples of LOGO in use

Here are some examples of LOGO commands being used to draw simple shapes. version of LOGO which can be accessed by clicking the link in the grey box found

LOGO commands

```
PENDOWN
FORWARD 60
RIGHT 90
FORWARD 60
RIGHT 90
FORWARD 30
RIGHT 90
```

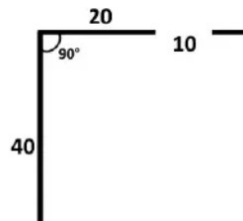


(Forward = FD, Right = RT, Left = LT)

Example two - a shape with gaps:

LOGO commands

```
PENDOWN
FORWARD 40
RIGHT 90
FORWARD 20
PENUP
FORWARD 10
PENDOWN
FORWARD 20
RIGHT 90
FORWARD 40
```



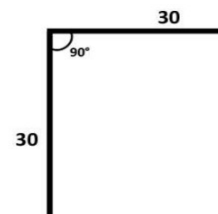
Example three - using REPEAT n ENDREPEAT:

1

```
PENDOWN
FORWARD 30
RIGHT 90
FORWARD 30
RIGHT 90
```

2

```
PENDOWN
REPEAT 4
FORWARD 30
RIGHT 90
```

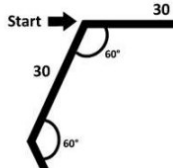


NOTE

Both of the options above draw the same shape to the left. Option 2 is more concise by using REPEAT.

Example four - your practice

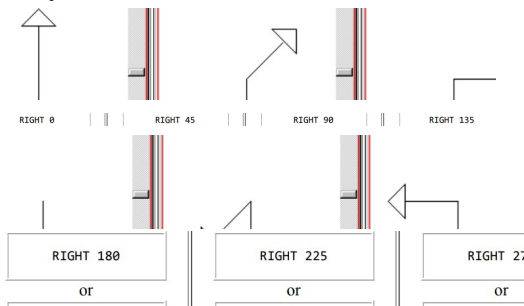
Shape to draw



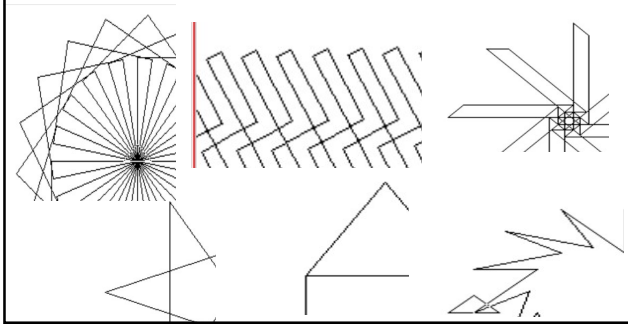
OpenGL commands



Activity:



Activity: Teach the turtle (Write the commands) to draw a design



Activity: Short Questions

1. Why is asking the turtle to turn by an amount greater than 359 unnecessary?
2. How can you draw something with curvy lines, like a circle?
3. How can you turn left by using the RIGHT command?
4. How can you go backwards using just the FORWARD command?
5. Why is giving two move instructions in a row unnecessary?
6. Why is giving two turn instructions in a row unnecessary?
7. How can you create a solid shape, like a square whose insides are completely black?

Activity: Short Questions

1. Apply OpenGL functions like `glTranslatef`, `glRotatef`, and `glVertex2f` to control turtle movement and drawing.
2. Apply the turtle graphics approach to solve practical drawing problems.
3. Develop and implement any algorithms that use turtle movement to draw regular shapes and recursive patterns.
4. Recognize and discuss any one example how turtle graphics concepts apply/ relate to educational tools, generative art, and algorithmic designs.

THANK YOU

