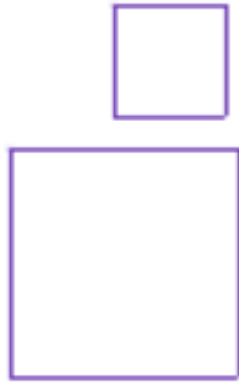


## Section 6 Understanding Loops

Name	Class
------	-------

```

pen down
repeat 4
  wait 1 secs
  move 60 steps
  wait 1 secs
  turn 90 degrees
pen up
  
```



```

pen down
repeat 4
  move 30 steps
  wait 1 secs
  turn 90 degrees
  wait 1 secs
pen up
  
```

```

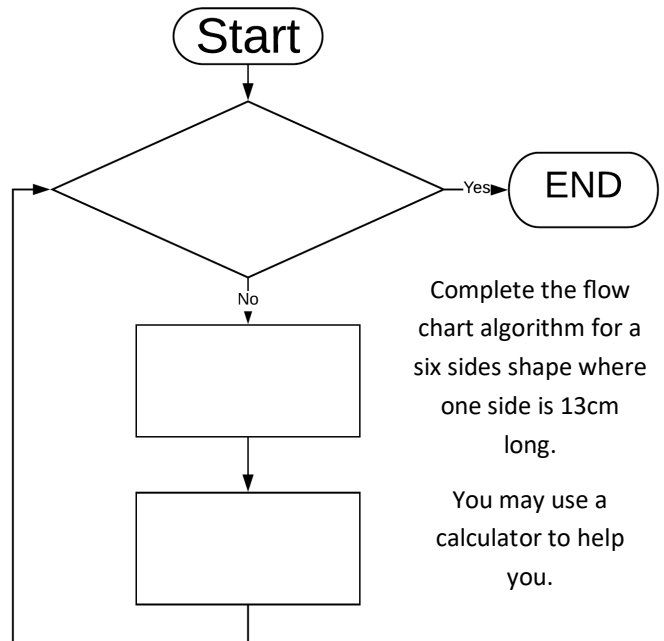
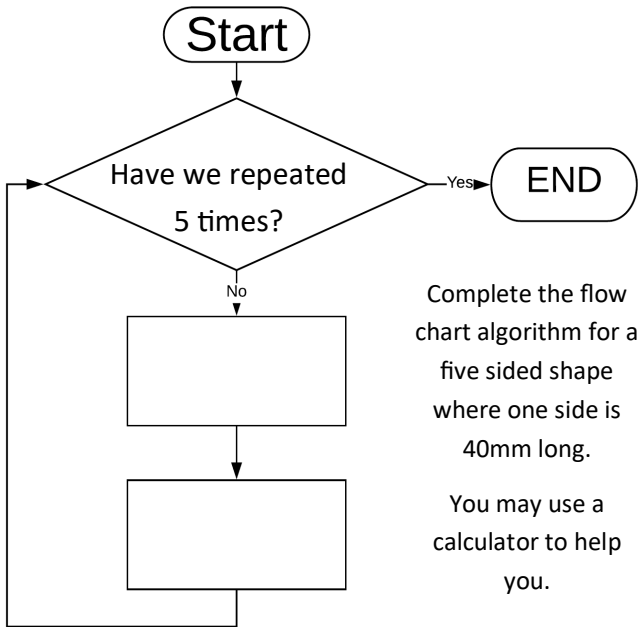
pen down
repeat 3
  turn 120 degrees
  wait 1 secs
  move 30 steps
  wait 1 secs
pen up
  
```



```

pen down
repeat 5
  wait 1 secs
  move 40 steps
  wait 1 secs
  turn 72 degrees
pen up
  
```

Draw lines to match the programming to the shape it draws.



```

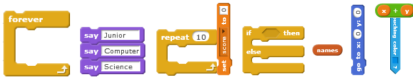
when d key pressed
pen down
repeat 10
  move 20 steps
  wait 0.3 secs
  turn 90 degrees
  wait 0.3 secs
pen up
  
```

Circle the bug in this code. Why is it a bug?

```

pen down
repeat 4
  wait 1 secs
  move 60 steps
  wait 1 secs
  turn 90 degrees
pen up
  
```

Circle the bug in this code. Why is it a bug?



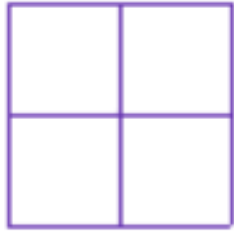
# Exploring Regular 2D Shapes & Patterns

## Section 7 Nested Loops

Top code block

```

pen down
repeat 4
  turn 90 degrees
  repeat 4
    move 30 steps
    turn 90 degrees
  end
end
pen up
  
```



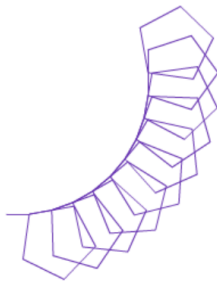
```

pen down
repeat 10
  move 20 steps
  turn 10 degrees
  repeat 5
    move 40 steps
    turn 72 degrees
  end
end
pen up
  
```



```

pen down
repeat 20
  move 5 steps
  repeat 5
    move 20 steps
    turn 72 degrees
  end
end
pen up
  
```



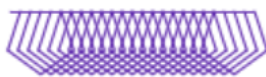
```

pen down
repeat 8
  change pen color by 10
  move 10 steps
  turn 45 degrees
  repeat 3
    move 50 steps
    turn 120 degrees
  end
end
pen up
  
```



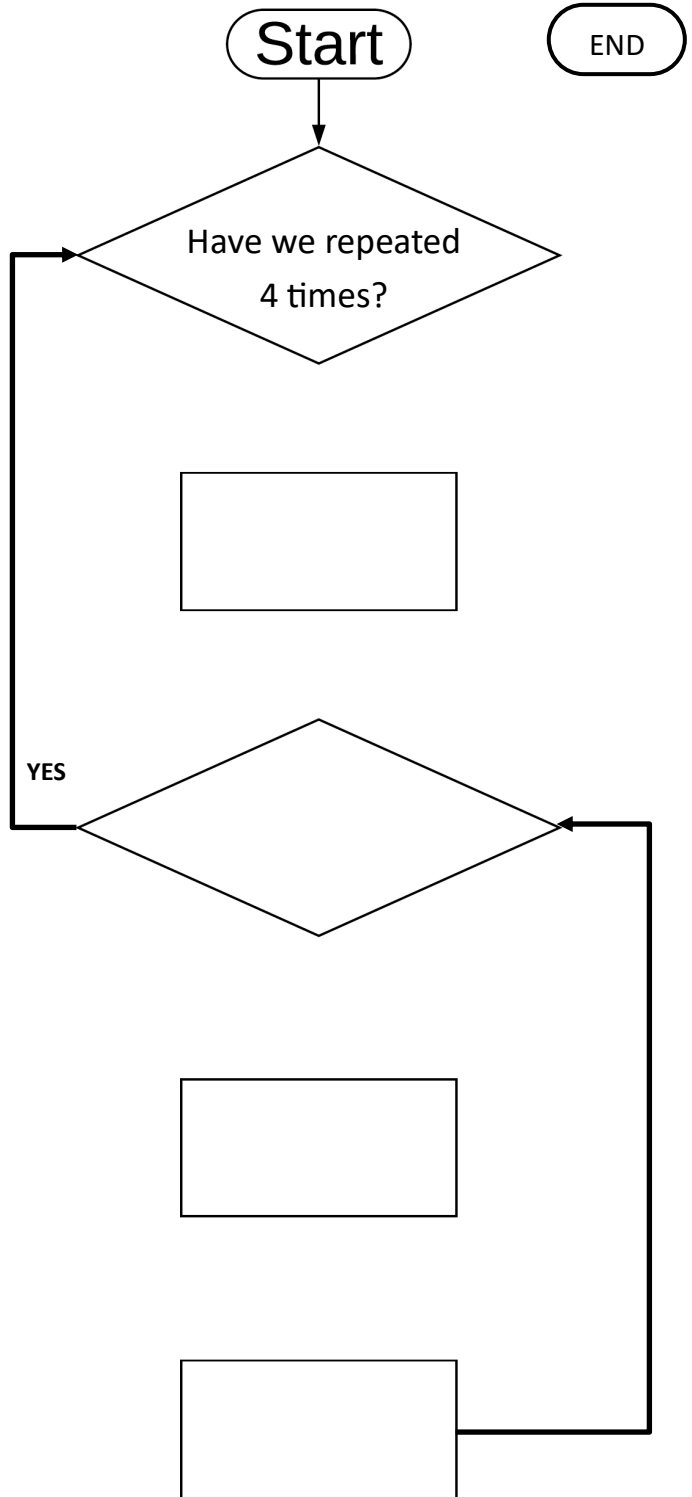
```

pen down
repeat 8
  repeat 3
    move 50 steps
    turn 120 degrees
  end
  move 10 steps
  turn 45 degrees
end
pen up
  
```

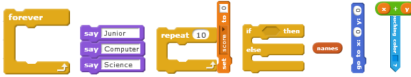


Draw a line connecting the nested loop code to the shape it draws.

Name	Class
------	-------



Finish the flowchart using the code from the top block on the left.

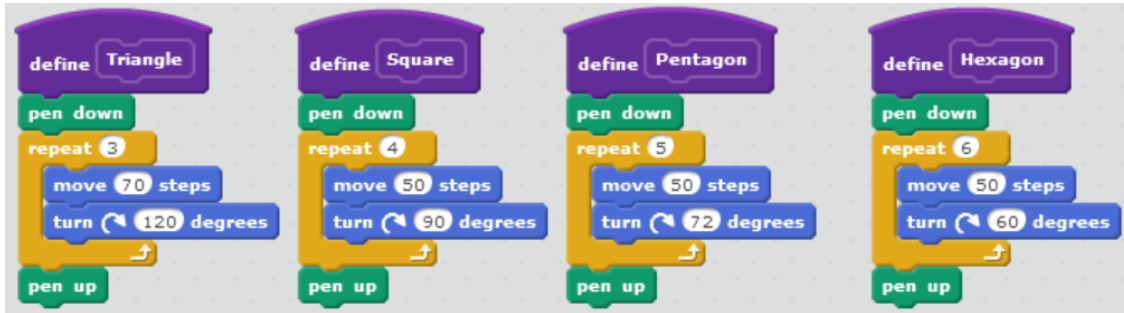


## Section 8 Simple Procedures

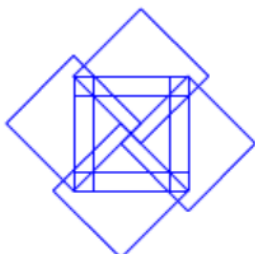
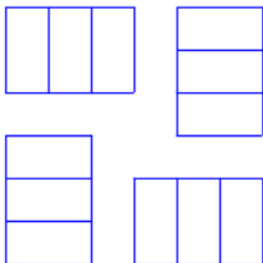
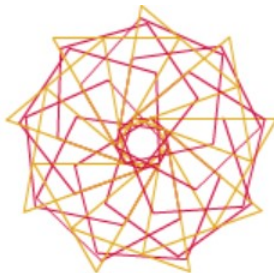
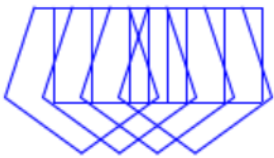
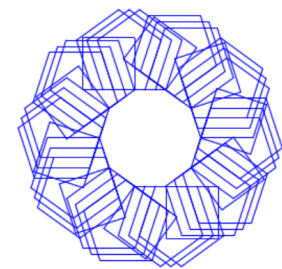
Name

Class

Every block of code below uses these four procedures



Match the code blocks below to the shapes that they draw and the written algorithm



```
repeat 4
  repeat 2
    Square
    move 25 steps
  turn 90 degrees
```

Repeat 10  
Draw Square  
Turn left 36 degrees  
Repeat 3  
Draw pentagon  
Move 10

```
repeat 4
  Pentagon
  move 10 steps
  Square
  move 10 steps
```

Repeat 4  
Repeat 2  
Draw Square  
Move backwards 25  
Turn right 90 degrees

```
repeat 9
  set pen color to red
  Pentagon
  move 10 steps
  set pen color to orange
  Triangle
  turn 40 degrees
```

Repeat 4  
Draw Pentagon  
Move 10  
Draw Square  
Move 10

```
repeat 10
  Square
  turn 36 degrees
  repeat 3
    Pentagon
    move 10 steps
```

Repeat 4  
Move 60  
Repeat 2  
Turn right 45 degrees  
Draw Square  
Turn left 45 degrees  
Turn Right 90 degrees

```
repeat 4
  Square
  move 60 steps
  repeat 2
    turn 45 degrees
  Square
  turn 45 degrees
  turn 90 degrees
```

Repeat 9  
Change colour to red  
Draw pentagon  
Move 10  
Change colour to orange  
Draw Triangle  
Turn right 40 degrees

## Section 9 Procedures with inputs

Name	Class
------	-------

```

define Regular 2D Shape Number of sides Distance of side Angle
pen down
repeat Number of sides
  move Distance of side steps
  turn Angle degrees
pen up
  
```

All the code below uses the procedure above. Draw the shapes produced by the code.

<pre> Regular 2D Shape 3 50 120   </pre>	<pre> Regular 2D Shape 3 50 120 turn 180 degrees Regular 2D Shape 3 50 120   </pre>
<pre> Regular 2D Shape 4 50 90 move 50 steps Regular 2D Shape 5 50 72   </pre>	<pre> repeat 3   Regular 2D Shape 4 50 90   turn 20 degrees   </pre>