

IBM Ponther This April 2021

Josephus Problem

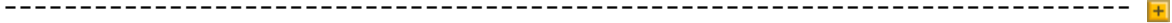
Code Visualisation Exemple 1

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-----+
Josephus[n2_Integer, q_Integer] := (list1 = {};
  list = Range[n2];
  AppendTo[list1, list];
  While[Length[list] ≠ qs,
    list = Rest[RotateLeft[list, q - 1]];
    AppendTo[list1, list];];
list1 = Table[list1[[s]] = RotateRight[Sort[list1[[s]],
  Greater], 2], {s, 1, Length[list1]}];
```

```
-----+
graph[n1_, q1_] := Table[t1 = t2 = 0;
  Graphics[R = Disk[{1, 1}, {0.7, 0.7}];
  pts = Table[{Cos[ $\frac{2 \pi (k + 0.5)}{n}$ ], Sin[ $\frac{2 \pi (k + 0.5)}{n}$ ]} +
    {1, 1}, {k, 0, n - 1}];
  nst = (RegionNearest[R, #1] &) /@ pts;
  Table[{Hue[ $\frac{i}{n}$ ], EdgeForm[Opacity[.8]], Disk[{1, 1},
    1, {t1 = t2, t2 =  $\frac{2 \pi}{n} + t1$ }], Black, Inset[list1[
    -n + n1 + 1][[i]], nst[[i]]], {i, n}]], {n, n1, q1, -1}]
```

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```
Visuel[n_, q_, l_] := (qs = n - 1;  
  Josephus[n, q];  
  graph[n, n - 1])
```



(Debug) In[149]:= **Visuel[8, 5, 3]**

