> $A := 2$

$$A := 2 \qquad (1)$$

> $h := n^2 + n + A$

$$h := n^2 + n + 2 \qquad (2)$$

> **for** n **from** 0 **to** $A - 1$ **do**
ifactor(h);
end do;

$$(2)$$
$$(2)^2 \qquad (3)$$

> *restart*

> $h := n^2 + n + \mathrm{A}$

$$h := n^2 + n + A \qquad (4)$$

> $A := 3$

$$A := 3 \qquad (5)$$

>

> **for** n **from** 0 **to** $A - 1$ **do**
ifactor(h);
end do;

$$(3)$$
$$(5)$$
$$(3)^2 \qquad (6)$$

> *restart*

> $h := n^2 + n + A$

$$h := n^2 + n + A \qquad (7)$$

> $A := 5$

$$A := 5 \qquad (8)$$

> **for** n **from** 0 **to** $A - 1$ **do**
ifactor(h);
end do;

$$(5)$$
$$(7)$$
$$(11)$$
$$(17)$$
$$(5)^2 \qquad (9)$$

> *restart*

> $h := n^2 + n + A$

$$h := n^2 + n + A \qquad (10)$$

> $A := 11$

$$A := 11 \qquad (11)$$

> **for** n **from** 0 **to** $A - 1$ **do**
ifactor(h);
end do;

$$(11)$$

$$(13)$$
$$(17)$$
$$(23)$$
$$(31)$$
$$(41)$$
$$(53)$$
$$(67)$$
$$(83)$$
$$(101)$$
$$(11)^2 \quad \textbf{(12)}$$

> *restart*

> $h := n^2 + n + A$

$$h := n^2 + n + A \quad \textbf{(13)}$$

> $A := 17$

$$A := 17 \quad \textbf{(14)}$$

```
> for n from 0 to A − 1 do
   ifactor(h);
   end do;
```

$$(17)$$
$$(19)$$
$$(23)$$
$$(29)$$
$$(37)$$
$$(47)$$
$$(59)$$
$$(73)$$
$$(89)$$
$$(107)$$
$$(127)$$
$$(149)$$
$$(173)$$
$$(199)$$
$$(227)$$
$$(257)$$
$$(17)^2 \quad \textbf{(15)}$$

> *restart*

> $h := n^2 + n + A$

$$h := n^2 + n + A \quad \textbf{(16)}$$

> $A := 41$

$$A := 41 \quad \textbf{(17)}$$

```
> for n from 0 to A − 1 do
   ifactor(h);
```

```
end do;
```

$$(41)$$
$$(43)$$
$$(47)$$
$$(53)$$
$$(61)$$
$$(71)$$
$$(83)$$
$$(97)$$
$$(113)$$
$$(131)$$
$$(151)$$
$$(173)$$
$$(197)$$
$$(223)$$
$$(251)$$
$$(281)$$
$$(313)$$
$$(347)$$
$$(383)$$
$$(421)$$
$$(461)$$
$$(503)$$
$$(547)$$
$$(593)$$
$$(641)$$
$$(691)$$
$$(743)$$
$$(797)$$
$$(853)$$
$$(911)$$
$$(971)$$
$$(1033)$$
$$(1097)$$
$$(1163)$$
$$(1231)$$
$$(1301)$$
$$(1373)$$
$$(1447)$$
$$(1523)$$
$$(1601)$$
$$(41)^2 \qquad \textbf{(18)}$$

> *# 7-31-2014 Matt*

> *# This shows by numerical demonstration that Euler's polynomial evaluates a prime values for every lucky number of Euler (2,3,5,11,17,41).*

> *#Eulers Polynomial is* $n^2 + n + A$.

> *# if n = 0 .. A - 2 and A is lucky then the polynomial is a prime number.*

>