

Petit programme sous MATLAB donnant les nombres premiers cousins c'est-à-dire distants de 4

Sans utilisation de nombres premiers

```
clear all
```

```
all_cousins=[3,7,11,13,17,19,23]
```

```
a=[13,15,17]
```

```
A=(a.^2-1)*9+5
```

```
i=8
```

```
faux_cousins=[]
```

```
h=1
```

```
while max(all_cousins)<300000
```

```
for k=(1:length(A))
```

```
p=(A(k)+4)^0.5-2;
```

```
p4=(A(k)+4)^0.5+2;
```

```
oui = 0;
```

```
for t=(1:length(all_cousins))
```

```
if (mod(p,all_cousins(t))==0 | mod(p4,all_cousins(t))==0)
```

```
oui = 1;
```

```
break
```

```
end
```

```
end
```

```
for t=(1:length(faux_cousins))
```

```
if (mod(p,faux_cousins(t))==0 | mod(p4,faux_cousins(t))==0)
```

```
oui = 1;
```

```
break
```

```
end
```

```
end
```

```
if oui==1
```

```
faux_cousins(h)=p;
```

```
h=h+1;
```

```
faux_cousins(h)=p4;
```

```
h=h+1;
end
if (oui==0)
all_cousins(i)=p;
i=i+1;
all_cousins(i)=p4;
i=i+1;
end
end
a=a+10;
A=(a.^2-1)*9+5;
end
prime=primes(100000000);
test=ismember(all_cousins,prime)
trouve=sum(test)
l=length(all_cousins)
pourcentage=trouve/l*100
```