

Pensieve header: Regular primes following <http://katlas.math.toronto.edu/drorbn/bbs/show?shot=Ramakrishna-120426-125449.jpg>.

```
RegPrime[p_] := (Times @@ (DeleteCases[
  Numerator /@ CoefficientList[Series[x / (E^x - 1), {x, 0, p}], x],
  0
] ~Mod~ p)) ≠ 0
```

```
{#, Prime[#], RegPrime[Prime[#]]} & /@ Range[50] // ColumnForm
```

```
{1, 2, True}  
{2, 3, True}  
{3, 5, True}  
{4, 7, True}  
{5, 11, True}  
{6, 13, True}  
{7, 17, True}  
{8, 19, True}  
{9, 23, True}  
{10, 29, True}  
{11, 31, True}  
{12, 37, False}  
{13, 41, True}  
{14, 43, True}  
{15, 47, True}  
{16, 53, True}  
{17, 59, False}  
{18, 61, True}  
{19, 67, False}  
{20, 71, True}  
{21, 73, True}  
{22, 79, True}  
{23, 83, True}  
{24, 89, True}  
{25, 97, True}  
{26, 101, False}  
{27, 103, False}  
{28, 107, True}  
{29, 109, True}  
{30, 113, True}  
{31, 127, True}  
{32, 131, False}  
{33, 137, True}  
{34, 139, True}  
{35, 149, False}  
{36, 151, True}  
{37, 157, False}  
{38, 163, True}  
{39, 167, True}  
{40, 173, True}  
{41, 179, True}  
{42, 181, True}  
{43, 191, True}  
{44, 193, True}  
{45, 197, True}  
{46, 199, True}  
{47, 211, True}  
{48, 223, True}  
{49, 227, True}  
{50, 229, True}
```

```
Prime[100]
```

```
541
```

```
Select[Prime /@ Range[50], ! RegPrime[#] &]  
{37, 59, 67, 101, 103, 131, 149, 157}
```

Compare with <http://oeis.org/A000928>.