

An interesting pattern of primes

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If you observe below there is a correlation between x and y . x will always be a positive even number and y will always be a positive odd number and its subtraction will give 7 until a certain prime number and there after it will be a different correlation where the result is 8 and after a while it will be 9 and so on. Later i will repost its new correlation, for now it is enough to see that this pattern holds until the 1062 nd prime.

mathematica

(Defining the ordered pairs)

```
pairs = {{8, 1}, {10, 3}, {12, 5}, {14, 7}, {16, 9}, {18, 11}, {20, 13}, {22, 15}, {24, 17}, {26, 19}, {28, 21}, {30, 23}};
```

(Function to verify if a is prime)

```
isPrimeZ[x_, y_] := Module[{z},  
  z = 7000 + 914 + y;  
  z == 7907 + x && PrimeQ[z]  
];
```

(Filttering the pairs that satisfy the condition)

```
results = Select[pairs, isPrimeZ[#[[1]], #[[2]]] &];
```

(Exhibiting the results)

```
results
```

```
{{12,5}, {20,13}, {26,19}, {30,23}}
```

mathematica

(Defining the ordered pairs)

```
pairs =  
{{10,2},{12,4},{14,6},{16,8},{18,10},{20,12},{22,14},{24,16},{26,18},{28,20},{30,22},  
{32,24},{34,26},{36,28},{38,30},{40,32},{42,34},{44,36},{46,38},{48,40},{50,42},{  
52,44},{54,46},{56,48},{58,50},{60,52},{62,54},{64,56},{66,58},{68,60},{70,62},{72,64},  
{74,66},{76,68},{78,70},{80,72},{82,74},{84,76},{86,78},{88,80},{90,82}};
```

(Function to verify if a is prime)

```
isPrimeZ[x_, y_] := Module[{z},  
  z = 16000 + 1395 + y;  
  z == 17387 + x && PrimeQ[z]  
];
```

(Filttering the pairs that satisfy the condition)

```
results = Select[pairs, isPrimeZ[#[[1]], #[[2]]] &];
```

(Exhibiting the results)
results

$\{\{14,6\},\{30,22\},\{32,24\},\{44,36\},\{56,48\},\{62,54\},\{80,72\},\{84,76\},\{90,82\}\}$