

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}}
```