

```

primes
0:  &()  *t0 <- &_str_9
1:  param 0 <- t0
2:  call  WriteStr
3:  call  WriteLn
4:  &()  *t1 <- &_str_10
5:  param 0 <- t1
6:  call  WriteStr
7:  call  t2 <- ReadInt
8:  assign n <- t2
9:  param 1 <- n
10: &()  *t3 <- &p
11: param 0 <- t3
12: call  t4 <- CalcPrimes
13: assign pn <- t4
14: param 2 <- pn
15: param 1 <- n
16: &()  *t5 <- &p
17: param 0 <- t5
18: call  PrintPrimes

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CalcPrimes
0:  &()  *t6 <- &_str_1
1:  param 0 <- t6
2:  call  WriteStr
3:  param 0 <- n
4:  call  WriteInt
5:  &()  *t7 <- &_str_2
6:  param 0 <- t7
7:  call  WriteStr
8:  param 1 <- 1
9:  param 0 <- p
10: call  t8 <- DIM
11: assign N <- t8
12: if    t8 < 1 goto 5_if_true
13: goto 6_if_false
14: 5_if_true:
15: return 0
16: goto 4
17: 6_if_false:
18: 4:
19: assign t9 <- 0
20: param 0 <- p
21: call  t10 <- DOFS
22: add   t11 <- 0, t10
23: add   t12 <- p, t11
24: assign @t12 <- 1 // *t12 = &p
25: assign t13 <- 4
26: param 0 <- p
27: call  t14 <- DOFS
28: add   t15 <- 4, t14
29: add   t16 <- p, t15
30: assign @t16 <- 2 // *t16 = &p
31: assign pidx <- 2
32: assign psqrt <- 1
33: assign v <- 3
34: 15_while_cond:
35: if    v <= n goto 16_while_body
36: goto 14
37: 16_while_body:
38: assign isprime <- 1
39: assign i <- 1
40: 21_while_cond:
41: if    isprime = 1 goto 23
42: goto 20
43: 23:
44: if    i <= psqrt goto 22_while_body
45: goto 20
46: 22_while_body:
47: mul   t17 <- i, 4
48: param 0 <- p
49: call  t18 <- DOFS
50: add   t19 <- t17, t18
51: add   t20 <- p, t19
52: div   t21 <- v, @t20
53: mul   t22 <- i, 4
54: param 0 <- p
55: call  t23 <- DOFS
56: add   t24 <- t22, t23
57: add   t25 <- p, t24
58: mul   t26 <- t21, @t25
59: if    t26 = v goto 26_if_true
60: goto 27_if_false
61: 26_if_true:
62: assign isprime <- 0
63: goto 25
64: 27_if_false:
65: 25:
66: add   t27 <- i, 1
67: assign i <- t27
68: goto 21_while_cond
69: 20:
70: if    isprime = 1 goto 32_if_true
71: goto 33_if_false
72: 32_if_true:
73: mul   t28 <- pidx, 4
74: param 0 <- p
75: call  t29 <- DOFS
76: add   t30 <- t28, t29
77: add   t31 <- p, t30
78: assign @t31 <- v // *t31 = &p
79: add   t32 <- pidx, 1
80: assign pidx <- t32
81: if    t32 = t8 goto 38_if_true
82: goto 39_if_false
83: 38_if_true:
84: &()  *t33 <- &_str_3
85: param 0 <- t33
86: call  WriteStr
87: assign n <- 0
88: goto 37
89: 39_if_false:
90: 37:
91: goto 31
92: 33_if_false:
93: 31:
94: add   t34 <- v, 2
95: assign v <- t34
96: mul   t35 <- psqrt, 4
97: param 0 <- p
98: call  t36 <- DOFS
99: add   t37 <- t35, t36
100: add   t38 <- p, t37
101: mul   t39 <- psqrt, 4
102: param 0 <- p
103: call  t40 <- DOFS
104: add   t41 <- t39, t40
105: add   t42 <- p, t41
106: mul   t43 <- @t38, @t42
107: if    t34 > t43 goto 45_if_true
108: goto 46_if_false
109: 45_if_true:
110: add   t44 <- psqrt, 1
111: assign psqrt <- t44
112: if    t44 >= pidx goto 50_if_true
113: goto 51_if_false
114: 50_if_true:
115: &()  *t45 <- &_str_4
116: param 0 <- t45
117: call  WriteStr
118: assign n <- 0
119: goto 49
120: 51_if_false:
121: 49:
122: goto 44
123: 46_if_false:
124: 44:
125: goto 15_while_cond
126: 14:
127: &()  *t46 <- &_str_5
128: param 0 <- t46
129: call  WriteStr
130: param 0 <- pidx
131: call  WriteInt
132: &()  *t47 <- &_str_6
133: param 0 <- t47
134: call  WriteStr
135: call  WriteLn
136: return pidx

```

```

PrintPrimes
0:  &()  *t6 <- &_str_7
1:  param 0 <- t6
2:  call  WriteStr
3:  param 0 <- n
4:  call  WriteInt
5:  call  WriteLn
6:  assign i <- 0
7: 5_while_cond:
8:  if    i < pn goto 6_while_body
9:  goto 4
10: 6_while_body:
11: &()  *t7 <- &_str_8
12: param 0 <- t7
13: call  WriteStr
14: mul   t8 <- i, 4
15: param 0 <- p
16: call  t9 <- DOFS
17: add   t10 <- t8, t9
18: add   t11 <- p, t10
19: param 0 <- @t11
20: call  WriteInt
21: add   t12 <- i, 1
22: assign i <- t12
23: div   t13 <- t12, 8
24: mul   t14 <- t13, 8
25: if    t14 = t12 goto 12_if_true
26: goto 13_if_false
27: 12_if_true:
28: call  WriteLn
29: goto 11
30: 13_if_false:
31: 11:
32: goto 5_while_cond
33: 4:
34: call  WriteLn

```