# Code

```
while j < 100:
    j += 1
    if a is None:
        break
    a = a.f()
```

```
n = self.value >> 2
if n == 1:
    return None
return self.build(n)
```

```
if n & 1 == 0:
    return Even(n)
else:
    return Odd(n)
```

```
self.value = n
```

# Frames

$a = a_2$
$j = j_2$

$n = i_2$
$self = a_1$

$n = i_2$

$self = a_2$

# Trace

$[j_1,\ a_1]$
$j_2$ = int_add($j_1$, 1)
guard_nonnull($a_1$)
guard_class($a_1$, Even)
$i_1$ = getfield_gc($a_1$, descr='value')
$i_2$ = int_rshift($i_1$, 2)
$b_1$ = int_eq($i_2$, 1)
guard_false($b_1$)
$i_3$ = int_and($i_2$, 1)
$i_4$ = int_is_zero($i_3$)
guard_true($i_4$)
$a_2$ = new(Even)
setfield_gc($a_2$, descr='value')
$b_2$ = int_lt($j_2$, 100)
guard_true($b_2$)
jump($j_2$, $a_2$)