

```
restart
print("aliquot sequence")
```

"aliquot sequence"

```
restart ( )
```

(1)

```
alise := proc(a);
description "find sum of proper divisors of _a_";
local temp, b;
temp := 0;
for b from 1 to ceil( $\frac{a}{2}$ ) do
if  $\frac{a}{b} = \text{floor}(\frac{a}{b})$  then temp := temp + b; end if;
end do;
return temp
end proc;
```

```
proc(a)
```

```
  local temp, b;
```

```
  description "find sum of proper divisors of _a_";
```

```
  temp := 0;
```

```
  for b to ceil(1/2 * a) do if a/b = floor(a/b) then temp := temp + b end if end do;
```

```
  return temp
```

```
end proc
```

```
print("test procedure")
```

"test procedure"

```
alise(8)
```

7

```
alise(12)
```

16

```
alise(5)
```

1

```
print("second step")
```

"second step"

```
num := 8;
```

```
while num > 1 do
```

```
  num := alise(num);
```

```
end do;
```

8

7

1

```
for c from 1 to 4 do
```

```
  temp2 := c;
```

```
  while temp2 > 1 do
```

```
    temp2 := alise(temp2);
```

```
    print(temp2)
```

```
  end do;
```

(8)

```
print(" ")
end do;
```

```
1
" "
2
1
" "
3
1
" "
4
3
1
" "
```

(9)

```
print(" correct output ")
```

```
" correct output "
```

(10)

```
print(" the aliquot sequence for 4 is 4, 3, 1. because the proper divisors of 4 are 1 and 3")
```

```
" the aliquot sequence for 4 is 4, 3, 1. because the proper divisors of 4 are 1 and 3"
```

(11)

```
print(" furthur the proper divisors of 3 are, only 1")
```

```
" furthur the proper divisors of 3 are, only 1"
```

(12)

```
print(" so the sequence for 4, goes simply 4 to 3 to 1")
```

```
" so the sequence for 4, goes simply 4 to 3 to 1"
```

(13)

```
print("furthur, the aliquot sequence for any prime number will go to one in one step")
```

```
"furthur, the aliquot sequence for any prime number will go to one in one step"
```

(14)