

void Hanoi (int n)

{

int i; ①

int n; ①

printf("Enter n") ①

scanf("%d", &n) ①

while (n > 1) ①
{

return 1;

for (i = 1; n > i; i++) ①
{

return 2 * Hanoi(n-1) + 1 ①
}

printf("End"); ①

}

}

Answer

$$1 + 1 + 1 + 1 + n + \log n + (n + 1)$$

$$4 + n + \log n + 2$$

$$6 + n + \log n + 2$$

$$8 + \log n^2 + 2$$

$$10 + 2 \log n^2 =$$

$$10 + \log n^2$$

$$= O(\log n^2)$$

```
void GCD (int x, int y)
{
```

```
    int b = 0; (1)
```

```
    int x; (1)
```

```
    int y; (1)
```

```
    for (y=0; b <= y; y++) (n)
```

```
    {
```

```
        return x; (1)
```

```
        while (x > y, x != 0) (log n)
```

```
            return (y, x % y) (1)
```

```
    }
```

```
}
```

```
}
```

Answer

$$1 + 1 + 1 + (n + 1) + (\log n) + 1$$

$$3 + n(1 + \log n) + 1$$

$$3 + n(2 + \log n)$$

$$O(n(2 + \log n))$$

$$= O(\log n)$$