runner% **cat hanoi.c** /* Towers of Hanoi program */ /* Written by N.R. Wagner, 28 Jan 1998 */ #include <stdio.h> void move(int start, int temp, int end, int n); void main()

```
{
    int n;
    scanf("%i", &n);
    move(1, 2, 3, n);
}
void move(int start, int temp, int end, int n)
{
    static int step = 0;
    if (n > 0){
        move(start, end, temp, n-1);
        printf("Step %2i:"
            " Move disk %i from %i to %i.\n".
```

++step, n, start, end);

move(temp, start, end, n-1);

```
}
}
```

```
runner% lint -m -u hanoi.c
```

function returns value which is always ignored printf scanf runner% cc -o hanoi hanoi.c runner% hanoi Step 1: Move disk 1 from 1 to 3. runner% hanoi 2 Step 1: Move disk 1 from 1 to 2. Step 2: Move disk 2 from 1 to 3. Step 3: Move disk 1 from 2 to 3. runner% hanoi 3 Step 1: Move disk 1 from 1 to 3. Step 2: Move disk 2 from 1 to 2. Step 3: Move disk 1 from 3 to 2. Step 4: Move disk 3 from 1 to 3. Step 5: Move disk 1 from 2 to 1. Step 6: Move disk 2 from 2 to 3. Step 7: Move disk 1 from 1 to 3.

runner% hanoi 4 Step 1: Move disk 1 from 1 to 2. Step 2: Move disk 2 from 1 to 3. Step 3: Move disk 1 from 2 to 3. Step 4: Move disk 3 from 1 to 2. Step 5: Move disk 1 from 3 to 1. Step 6: Move disk 2 from 3 to 2. Step 7: Move disk 1 from 1 to 2. Step 8: Move disk 4 from 1 to 3. Step 9: Move disk 1 from 2 to 3. Step 10: Move disk 2 from 2 to 1. Step 11: Move disk 1 from 3 to 1. Step 12: Move disk 3 from 2 to 3. Step 13: Move disk 1 from 1 to 2. Step 14: Move disk 2 from 1 to 3. Step 15: Move disk 1 from 2 to 3. runner% hanoi 5 Step 1: Move disk 1 from 1 to 3. Step 2: Move disk 2 from 1 to 2. Step 3: Move disk 1 from 3 to 2. Step 4: Move disk 3 from 1 to 3. Step 5: Move disk 1 from 2 to 1. Step 6: Move disk 2 from 2 to 3. Step 7: Move disk 1 from 1 to 3. Step 8: Move disk 4 from 1 to 2. Step 9: Move disk 1 from 3 to 2. Step 10: Move disk 2 from 3 to 1. Step 11: Move disk 1 from 2 to 1. Step 12: Move disk 3 from 3 to 2. Step 13: Move disk 1 from 1 to 3. Step 14: Move disk 2 from 1 to 2. Step 15: Move disk 1 from 3 to 2. Step 16: Move disk 5 from 1 to 3. Step 17: Move disk 1 from 2 to 1. Step 18: Move disk 2 from 2 to 3. Step 19: Move disk 1 from 1 to 3. Step 20: Move disk 3 from 2 to 1. Step 21: Move disk 1 from 3 to 2. Step 22: Move disk 2 from 3 to 1. Step 23: Move disk 1 from 2 to 1. Step 24: Move disk 4 from 2 to 3. Step 25: Move disk 1 from 1 to 3. Step 26: Move disk 2 from 1 to 2. Step 27: Move disk 1 from 3 to 2. Step 28: Move disk 3 from 1 to 3. Step 29: Move disk 1 from 2 to 1. Step 30: Move disk 2 from 2 to 3. Step 31: Move disk 1 from 1 to 3. runner%