

```
> with(combinat)
[Chi, bell, binomial, cartprod, character, choose, composition, conjpart, decodepart,
 encodepart, eulerian1, eulerian2, fibonacci, firstcomb, firstpart, firstperm, graycode,
 inttovec, lastcomb, lastpart, lastperm, multinomial, nextcomb, nextpart, nextperm,
 numbcomb, numbcomp, numbpert, numbperm, partition, permute, powerset, prevcomb,
 prevpart, prevperm, randcomb, randpart, randperm, rankcomb, rankperm, setpartition,
 stirling1, stirling2, subsets, unrankcomb, unrankperm, vectoint]
```

(1)

```
> A := {seq(n, n = 1..5)}
A := {1, 2, 3, 4, 5}
```

(2)

```
> B := powerset(A)
B := {{}, {1}, {2}, {3}, {4}, {5}, {1, 2}, {1, 3}, {1, 4}, {1, 5}, {2, 3}, {2, 4}, {2, 5}, {3,
 4}, {3, 5}, {4, 5}, {1, 2, 3}, {1, 2, 4}, {1, 2, 5}, {1, 3, 4}, {1, 3, 5}, {1, 4, 5}, {2, 3, 4},
 {2, 3, 5}, {2, 4, 5}, {3, 4, 5}, {1, 2, 3, 4}, {1, 2, 3, 5}, {1, 2, 4, 5}, {1, 3, 4, 5}, {2, 3, 4,
 5}, {1, 2, 3, 4, 5}}
```

(3)

```
> numbcomb(A, 3)
10
```

(4)

```
> choose(A, 3)
{{1, 2, 3}, {1, 2, 4}, {1, 2, 5}, {1, 3, 4}, {1, 3, 5}, {1, 4, 5}, {2, 3, 4}, {2, 3, 5}, {2, 4, 5},
 {3, 4, 5}}
```

(5)

```
> nops(B)
32
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(6)

```
>
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