
Haskell — Various factorials

P32333_en

Write 8 *essentially different* functions that compute the factorial of a natural number in Haskell. You can use recursion, final recursion, no recursion, guards, **if then else**, `map`, `fold`s, infinite lists...

Specification

You should define the following functions:

```
fact1 :: Integer → Integer
fact2 :: Integer → Integer
fact3 :: Integer → Integer
fact4 :: Integer → Integer
fact5 :: Integer → Integer
fact6 :: Integer → Integer
fact7 :: Integer → Integer
fact8 :: Integer → Integer
```

Sample input 1

```
fact1 6
fact2 6
fact3 6
fact4 6
fact5 6
fact6 6
fact7 6
fact8 6
fact1 20
```

Sample output 1

```
720
720
720
720
720
720
720
720
2432902008176640000
```

Problem information

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