```
soln = μ /. First@First@Solve[1 - CDF[NormalDistribution[μ, σ]][0] == p, μ]
```

Solve::ifun :

Inverse functions are being used by Solve, so some solutions may not be found; use Reduce for complete solution information. >>

$$\sqrt{2}\ \sigma\ \text{InverseErfc}[-2\ (-1+p)]$$

```
f = soln /. σ → 1
```

$$\sqrt{2}\ \text{InverseErfc}[-2\ (-1+p)]$$

```
g = Normal@Series[g, {p, 1/2, 1}]
```

$$\left(-\frac{1}{2}+p\right)\sqrt{2\,\pi}$$

```
Plot[{f, g}, {p, 0.01, 0.99}]
```