```
> read `multi.maple`;
```

$$com := (x, y) \rightarrow x + I\,y$$

$$m := 2$$

$$Z_1 := 1 + I$$

$$Z_2 := 3 + 2\,I$$

$$q_1 := 3$$

$$q_2 := 5$$

$$\phi := z \rightarrow \sum_{i=1}^{m} q_i \log(z - Z_i)$$

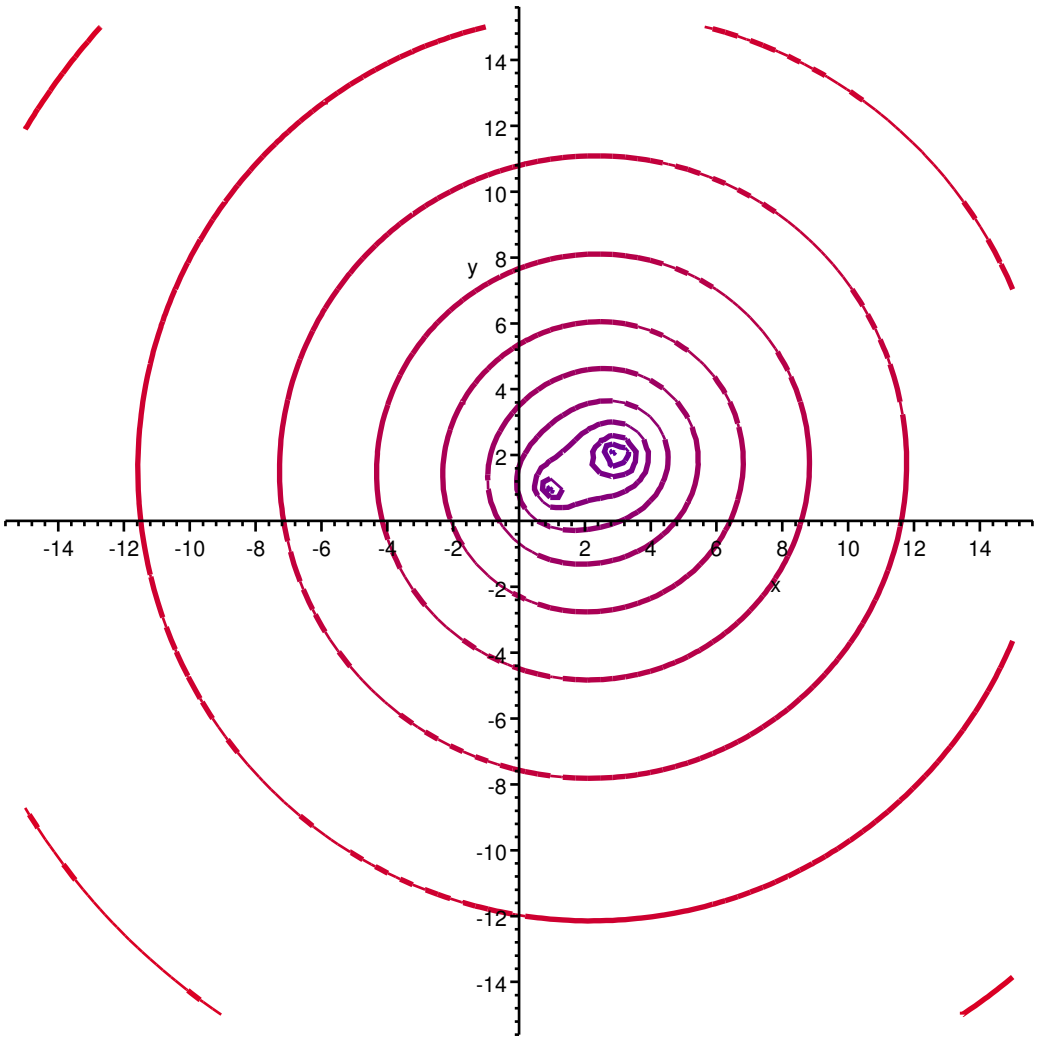
```
me_init := proc(pmax, a, Q)
local k;
    for k to pmax do a[k] := -sum(q[i]*Z[i]^k / k, i = 1 .. m) od; Q := sum(q[i], i = 1 .. m)
end
```

$$me := (p, z) \rightarrow Q \log(z) + \left(\sum_{k=1}^{p} \frac{a_k}{z^k} \right)$$

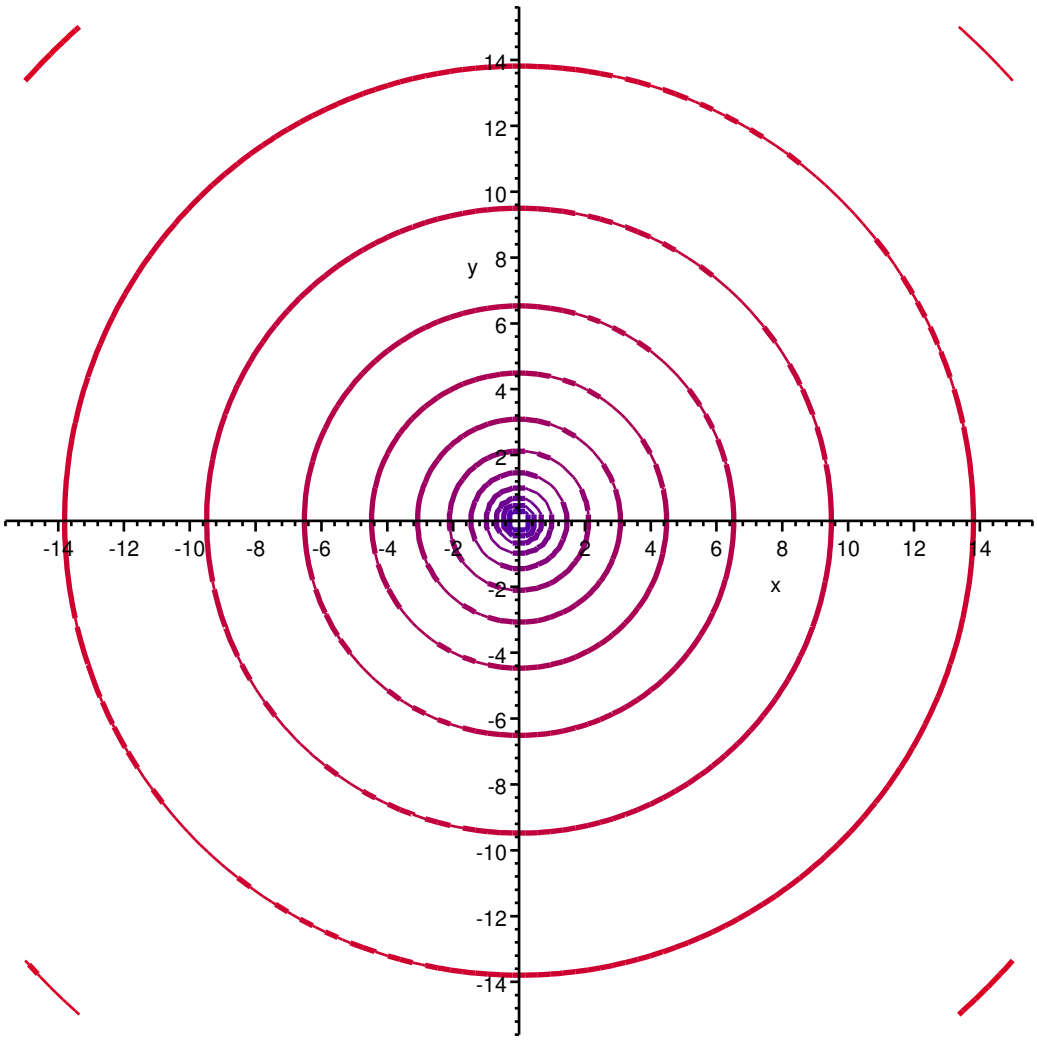
$$8$$

$$gr := 80$$

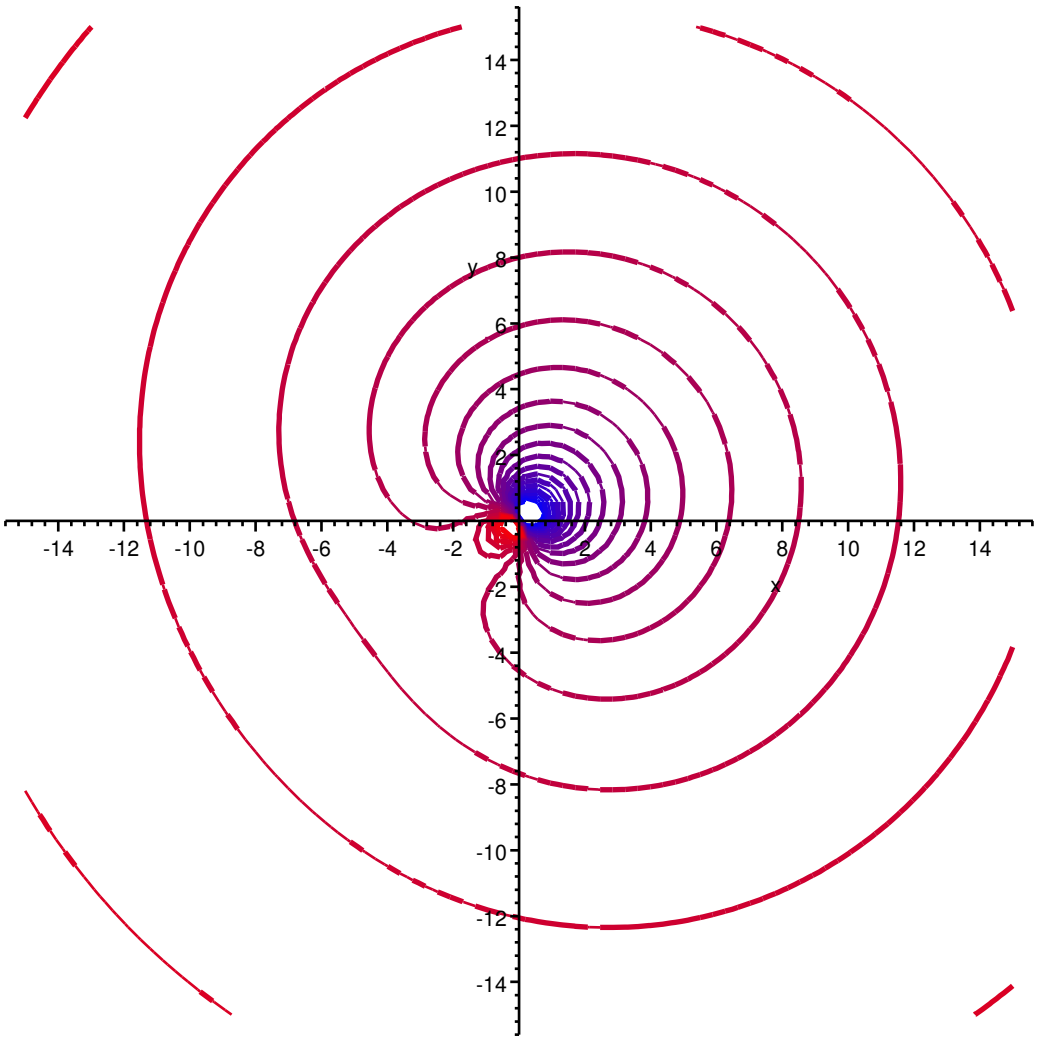
exact potential



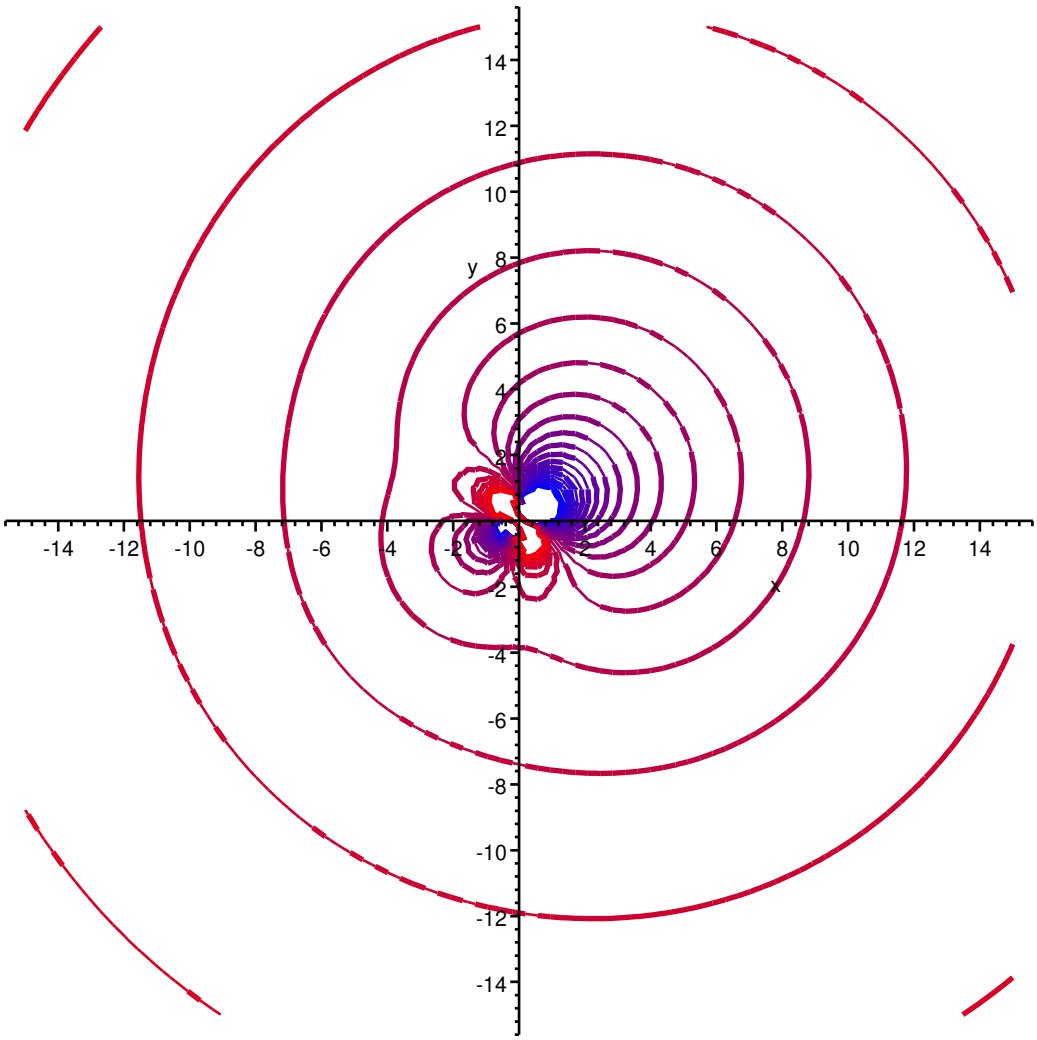
multipole, p=0



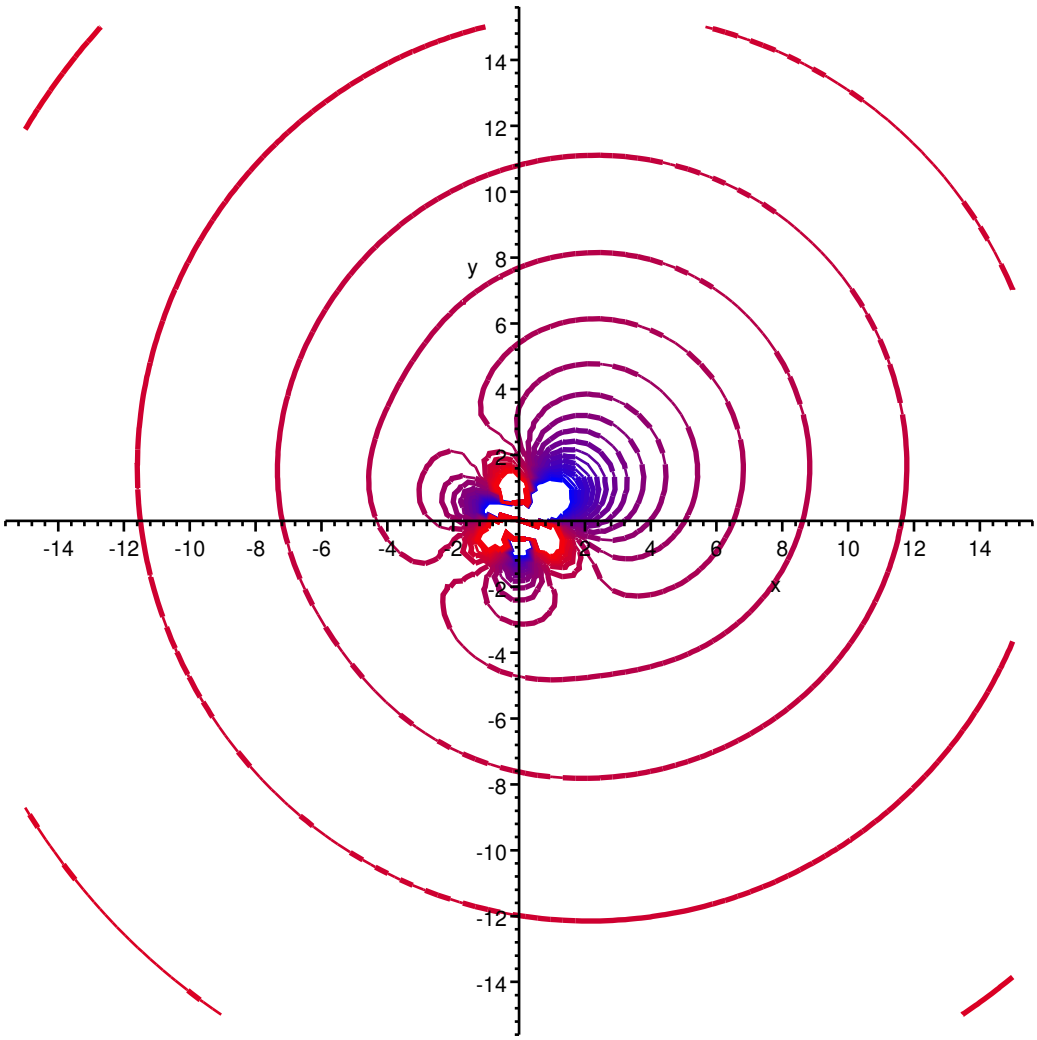
multipole, p=1



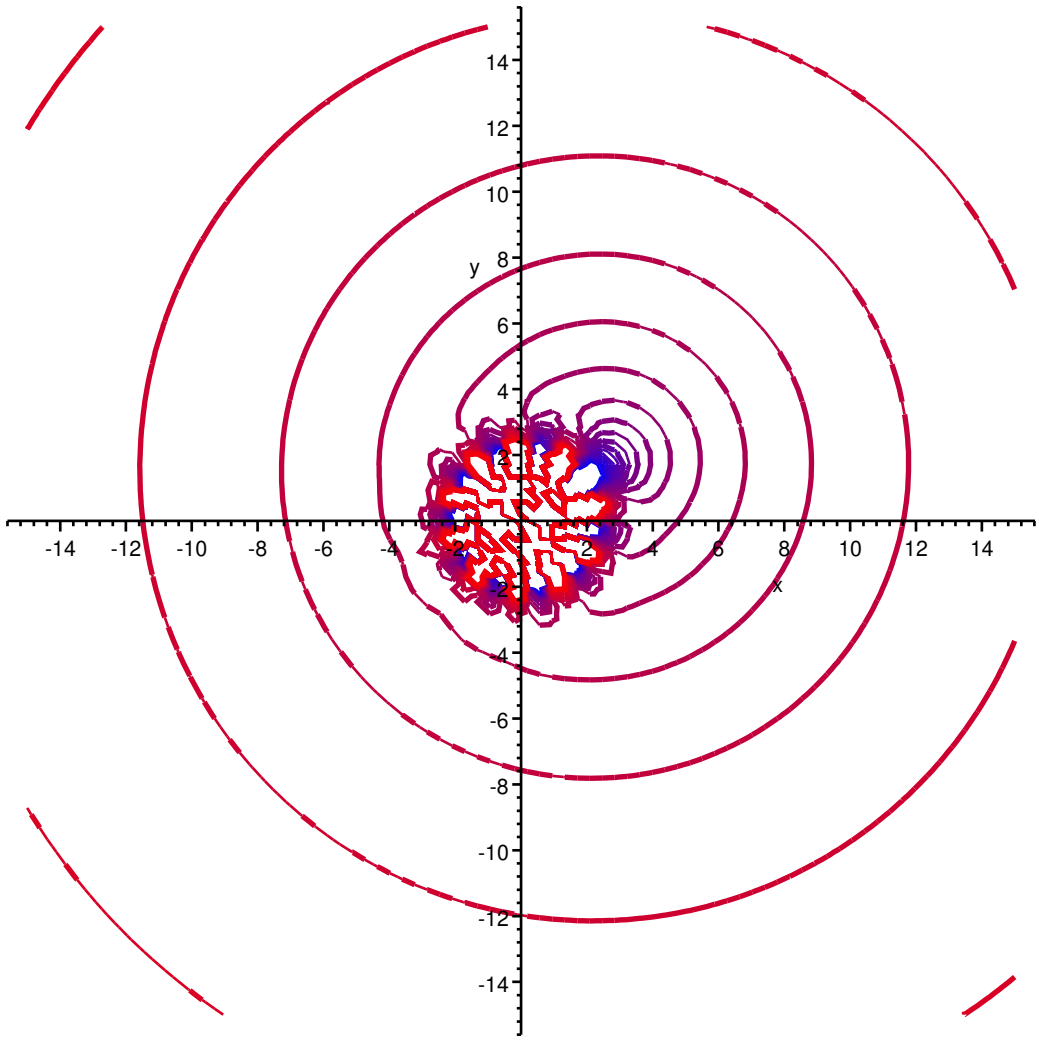
multipole, p=2



multipole, p=3



multipole, p=10



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