

例 3.16 IPSUTM 内点法

修改参数: f: 目标函数

g: 约束条件

"""

```
from sympy import *
```

```
def IPSUTM():
```

```
    # 设置变量
```

```
    x = symbols("x")
```

```
    rk = symbols("rk")
```

```
    # 构造增广函数
```

```
    T = f + rk * (1 / g)
```

```
    # 解析求解
```

```
    difyL_x = diff(T, x)
```

```
    result = solve(difyL_x, x)
```

```
    print(result)
```

```
    result_ = limit(result[3], rk, 0)
```

```
    print("原问题的最优解为: ", result_)
```

```
if __name__ == '__main__':
```

```
    x = symbols("x")
```

```
    f = 1 / 3 * x ** 3
```

```
    g = x - 1
```

```
    IPSUTM()
```