```python
for N in range(1, 10000):
    N1=bin(N)[2:]
    for i in range(2):
        N1+=str(N1.count('1')%2)
    R=int(N1,2)
    if R>170:
        print(N)
        break

for N in range(2, 10000):
    N1=bin(N)[2:]
    N1+=N1[-2]
    N1+=N1[1]
    R=int(N1,2)
    if R>150:
        print(N)
        break

for N in range(10, 10000):
    N1=bin(N)[2:]
    N1=N1[:-1]
    N1+=N1[1]+N1[1]
    R=int(N1,2)
    if R>92:
        print(N)
        break

for N in range(100, 10000):
    N1=bin(N)[2:]
    for i in range(3):
        k0=N1.count('0')
        k1=N1.count('1')
        if k0==k1:
            N1+=N1[-1]
        elif k0>k1:
            N1+='1'
        else:
            N1+='0'
    R=int(N1,2)
    if R%4==0:
        print(N)
        break

k=0
for N in range(2, 10000):
    N1=N
    if N1%2==0:
```

```python
            N1//=2
    else:
        N1-=1
    if N1%3==0:
            N1//=3
    else:
        N1-=1
    if N1%5==0:
            N1//=5
    else:
        N1-=1
    if N1==1:
        k+=1
print(k)
```