t=int(input())

while t>=0:

b=[i for i in input()]

#print(\*b)

c=int(input())

l=[]

f=[]

for i in range(len(b)):

if b[i]=="1":

l.append(i+1)

#print(l)

for i in range(1,50000):

for j in l:

if i%int(j)==0:

if i not in f:

f.append(i)

#print(f)

for i in range(len(f)):

if i==c-1:

y=f[i]

print(y)

break

t-=1