pb39 et pb9

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1 Integer right triangle, pb39

[52]:
```
check = lambda a,b,c : a*a + b*b == c*c
```

[110]:
```
def solutions(p):
    return sum((check(a,b,p-a-b) for a in range(3,int((p-3)/3)+1) for b in␣
 ↪range(a+1,int((p-a-1)/2)+1)))

def print_solutions(p):
    for a in range(3,int((p-3)/3)+1): # a < b < c ; p = a + b + c ; a² + b² = c²
        for b in range(a+1,int((p-a-1)/2)+1):
            c = p - a - b
            if check(a,b,c):
                print('a = %s, b = %s, c = %s' % (a,b,c))
```

[104]:
```
print_solutions(120)
```

```
a = 20, b = 48, c = 52
a = 24, b = 45, c = 51
a = 30, b = 40, c = 50
```

[111]:
```
p = 1000
res = list((solutions(p) for p in range(p+1))) # trouver la valeur de p
res.index(max(res))
```

[111]: 840

2 Triplets Pythagoriciens, pb9

[112]:
```
print_solutions(1000)
```

```
a = 200, b = 375, c = 425
```

[35]:
```
200 * 375 * 425 # abc
```

[35]: 31875000