

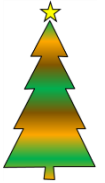


# CHRISTMAS MATH CHALLENGE 3D

1) Captain Salamander is collecting Christmas trees to sell at the market. He collects some trees. He sells some of the trees to two of his friends.

- He sells half his trees to Frazer and a third of the remaining trees to Sally.
- He takes 6 trees back home.

How many trees did he collect at the start?



2) Sally is counting her Christmas tree lights.

- She has between 1100 and 2000 lights.
- The hundreds digit of this numbers is a multiple of 4.
- The total of all the digits is 10.
- The number of lights is odd.

How many lights could Sally have?

See if you can find all 4 possibilities.





# CHRISTMAS MATH CHALLENGE 3D

## ANSWERS

1) Captain Salamander is collecting Christmas trees to sell at the market. He collects some trees. He sells some of the trees to two of his friends.

- He sells half his trees to Frazer and a third of the remaining trees to Sally.
- He takes 6 trees back home.

How many trees did he collect at the start?

18			
9			9
3	3	3	

- Captain Salamander takes 6 trees back which is  $\frac{2}{3}$  of the remaining trees after he has given half of them to Frazer.
- Sally ended up with 3 trees which is a third of the remaining trees. So half the number of trees must have been 9 trees.
- So the total number of trees must have been 18 trees!

2) Sally is counting her Christmas tree lights.

- She has between 1100 and 2000 lights.
- The hundreds digit of this numbers is a multiple of 4.
- The total of all the digits is 10.
- The number of lights is odd.

How many lights could Sally have?

Here are the possibilities for the number of trees Sally could have had:  
1405, 1423, 1441, 1801