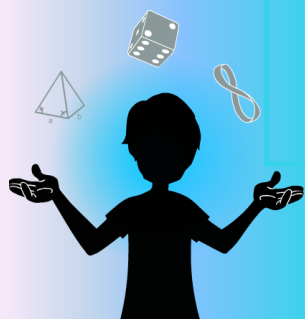# PUZZLING CARTOON

- PASCAL'S FISH -

AMAZINGMATHS

Materials:

- Video of the puzzle
- Sheets of paper
- Pencils
- Counting materials

The puzzle

Pascal goes on vacation to the cottage with his family. His father decides to introduce him to fishing. On the first day, Pascal catches his first fish. Very happy, he goes fishing again on the second day and he catches two fish. The third day, he catches three. Then, for several days, he always catches four fish. Pascal's vacation is coming to an end. Two days before leaving the cottage, Pascal catches three fish. The day before the last, he catches two. Finally, the last day of his vacation, he catches only one fish. During his vacation, Pascal caught 52 fish in total.

How many days did Pascal's vacation last for?

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PUZZLE SOLUTION

The answer:

Pascal's vacation lasted 16 days.

The solution:

We know that Pascal caught 1 fish on the first day, 2 on the second one and 3 on the third. During the first three days, he caught 6 fishes. We also know that he caught the same number of fish during the last three days. So, we know that, during those 6 days, Pascal caught 12 fish. The puzzle mentions that Pascal caught a total of 52 fish during his vacation. We can therefore find how many fish Pascal caught between the first three days and the last three days using the following operation:

$12 + \boxed{} = 52.$

$\boxed{} = 52 - 12.$

$\boxed{} = 40.$

However, the students will probably need to find this answer using materials. To do that, they can, for example, represent the 52 fish with 52 tokens. They can then create bunches of tokens that represent days. In this case, they would have 2 bunches of 1 token, 2 bunches of 2 tokens and 2 bunches of 3 tokens for a total of 6 bunches (6 days) and 12 tokens (12 fish). They would also have one last bunch of 40 tokens representing all the other fish caught during his vacation.

Once this information is found, the students have to find in how many days the 40 fish were caught. Since the puzzle mentions that all the other days Pascal caught 4 fish, we simply need to distribute the rest of the tokens into bunches of 4 until there are none left. They should make 10 bunches of 4 tokens. It is also possible to represent this operation with the following equation:

$\boxed{} \times 4 = 40.$

$\boxed{} = 40 \div 4.$

$\boxed{} = 10.$

Finally, the students have to count the total number of bunches they made, which is 16. We can also do the following operation to find the number of days:

3 days + 3 days + 10 days = 16 days.