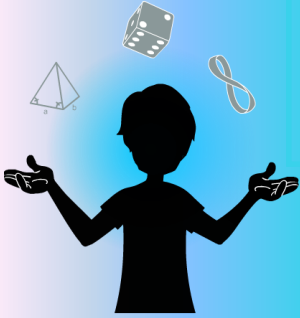


PUZZLING CARTOON

- THE MARKET -



AMAZINGMATHS

Materials:

- Video of the puzzle
- Pen and paper

The Puzzle

Justine goes to the market to trade her products. She has three trading options. She can trade: 1 egg for 2 corn cobs, 1 pumpkin for 1 cheese and 3 eggs, or 1 cheese for 2 eggs and 2 corn cobs.

Justine has a pumpkin and she wants to trade it for as many corn cobs as possible.



What is the maximum amount of corn cobs that Justine can get?



PUZZLE SOLUTION



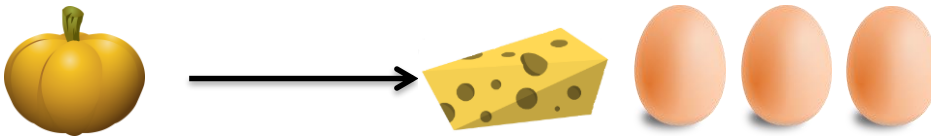
The answer:

In exchange for her pumpkin, Justine can get a maximum of 12 corn cobs.

The solution:

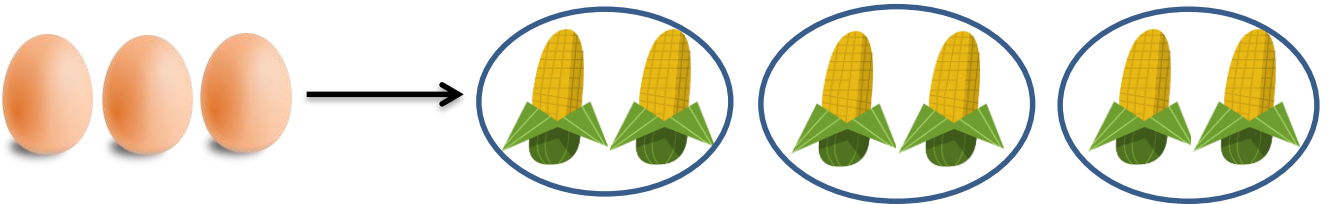
Justine wants to exchange her pumpkin for as many corn cobs as possible. Therefore, several trades need to be done for her to get the most amount of corn cobs possible.

Since there is only 1 exchange option with the pumpkin, that is the first exchange that will be done. By trading in her pumpkin, Justine gets 1 cheese and 3 eggs.

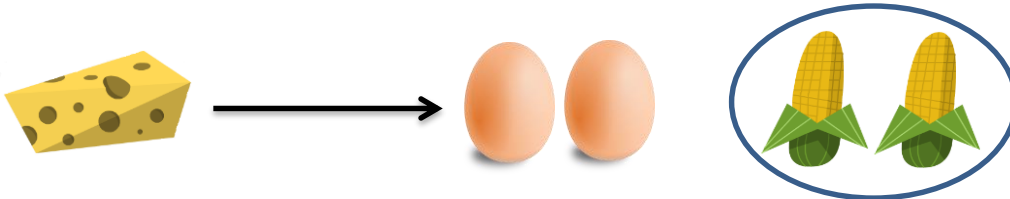


At this step, she still does not have any corn cobs.

In the possible trade options, in exchange of 1 egg, Justine can get 2 corn cobs. So, by trading the 3 eggs she got from her first exchange, Justin gets 6 corn cobs ($2 + 2 + 2 = 6$).

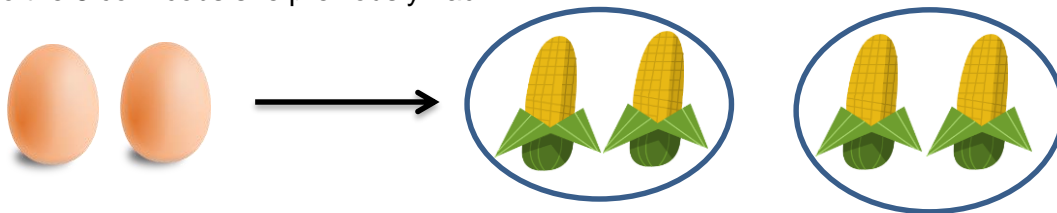


Justine can also do an exchange with her cheese. So, in exchange of the cheese, she gets 2 eggs and 2 corn cobs. These 2 corn cobs get added to the 6 corn cobs she already has.



Justine now has 8 corn cobs ($2 + 6 = 8$). It is important to notice that, to get the greatest amount of corn cobs possible, **she can still make another trade.**

Once again, Justine can trade the eggs she has. Both eggs can be exchanged, and each egg gives Justine 2 corn cobs. So, Justine trades the 2 eggs and adds the 4 corn cobs ($2 + 2 = 4$) she receives to the 8 corn cobs she previously had.



No more trades are possible.

At the end of all the possible trades, Justine's pumpkin allowed her to get 12 corn cobs ($8 + 4 = 12$).