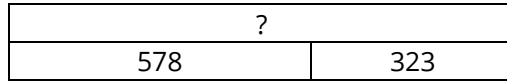


Possible Solutions

- a. Vanessa collected 578 marbles. Jake collected 323 marbles. If they put their marbles into one bag, how marbles would be in the bag? Draw a diagram and explain your thinking.



I drew a strip diagram to find the total number of marbles Jake and Vanessa had in their collection. I wrote 578 in one part of the strip diagram and wrote 323 in the other section. I know 578 is a larger number than 323 so I made that section larger as to represent the larger quantity 578 represents.

I then added the hundreds first so $500 + 300$ has a sum of 800. I then add the 70 and 20 in the tens place together for a sum of 90. Next I added the 8 and 3 in the ones place together and have a sum of 11 which I decomposed into $10 + 1$. I added the 10 to the 90 from the tens place for a sum of 100, leaving me with 1 in the ones place. I have $800 + 100 + 1$ when added to together gives me 901 marbles in Vanessa and Jake's collection.

- b. Maggie collected a lot of stickers for her album. She had 82 animal stickers, and 73 star stickers. She gave her friend 65 animal stickers, and 69 star stickers. How many stickers did Maggie have after she gave some away? Use a standard algorithm and explain your thinking.

$$\begin{array}{r} 712 \\ 82 \\ - 65 \\ \hline 17 \end{array} \qquad \begin{array}{r} 613 \\ 73 \\ - 69 \\ \hline 4 \end{array} \qquad \begin{array}{r} 1 \\ 17 \\ + 4 \\ \hline 21 \end{array}$$

First I subtracted 65 from 82 and found a difference of 17. I then subtracted 69 from 73 and found a difference of 4. I then added the 17 and the 4 together and found a sum of 21. Maggie has 21 stickers left and she gave some away.