

Possible Solution

For automaticity, this work should be done quickly in the student's head. Shown below are some possible thinking strategies.

- a) Amy has a new pack of 10 pencils and 4 pencils from an old pack. She gave 6 pencils from the new pack to her brother. How many pencils does she have?

First I decompose the 10 new pencils into $4 + 6$, so now I have $4 + 6 = 10$ and 4 pencils from the old pack. I know Amy gave 6 pencils away so I subtract 6 from 6 which leaves me with 4 pencil from the old pack and 4 pencils from the new pack. I add those together and have a sum of 8 because I added $4 + 4$ to get 8.

- b) John brought his marble collection to school. He has 11 blue marbles and 7 red marbles. At school, John lost 3 of his blue marbles. How many blue marbles does he have now? How many total marbles does he have left?

First I decompose the 11 blue marbles into $10 + 1$. John loses three so I subtract 3 from 10 and have a difference of 7. I then add the 1 to the 7 and have a sum of 8. John has 8 blue marbles.

I know John has 8 blue marbles so to find the total number of marbles he has, I decompose 7 into $5 + 2$. I add the 8 blue marbles to the 2 red marbles and have a sum of 10 marbles and then add the remaining 5 red marbles for a total of 15 marbles.