

Bank Game (one digit multiplier)

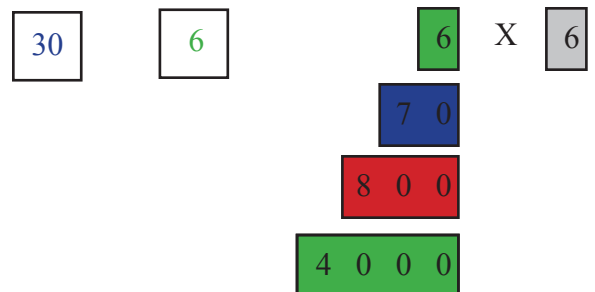
Step 1: The student lays out the contents of the bank in the appropriate order:

100000000	10000000	1000000	100000	10000	1000	100	10	1
200000000	20000000	2000000	200000	20000	2000	200	20	2
300000000	30000000	3000000	300000	30000	3000	300	30	3
400000000	40000000	4000000	400000	40000	4000	400	40	4
500000000	50000000	5000000	500000	50000	5000	500	50	5
600000000	60000000	6000000	600000	60000	6000	600	60	6
700000000	70000000	7000000	700000	70000	7000	700	70	7
800000000	80000000	8000000	800000	80000	8000	800	80	8
900000000	90000000	9000000	900000	90000	9000	900	90	9

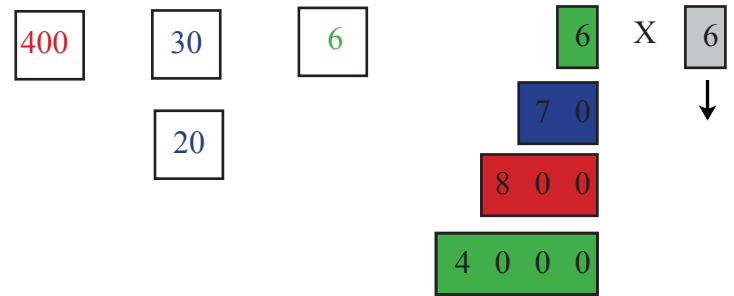
Step 2: Student lays out the problem using the colored tiles and gray tiles. And they expand it similar to the golden bead frame.



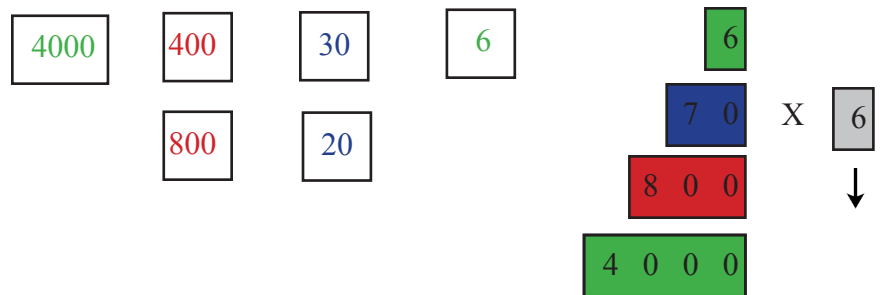
Step 3: Now do the problem. First multiply the problem out starting with $6 \times 6 = 36$. Place the answer out to the right by using the bank in Step 1



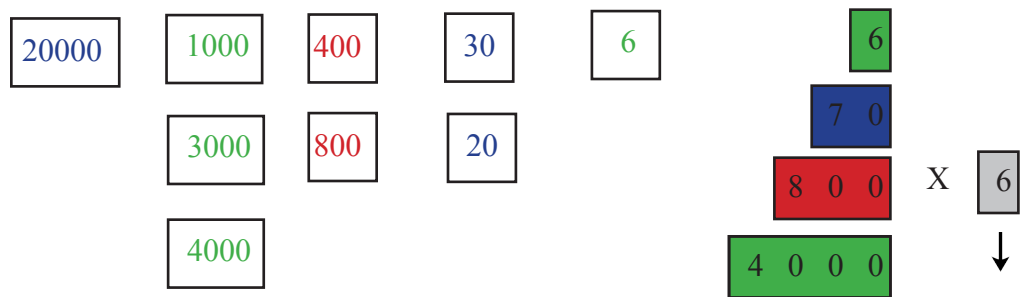
Step 4: Now move the 6 down to the 10s and multiplay out $70 \times 6 = 420$



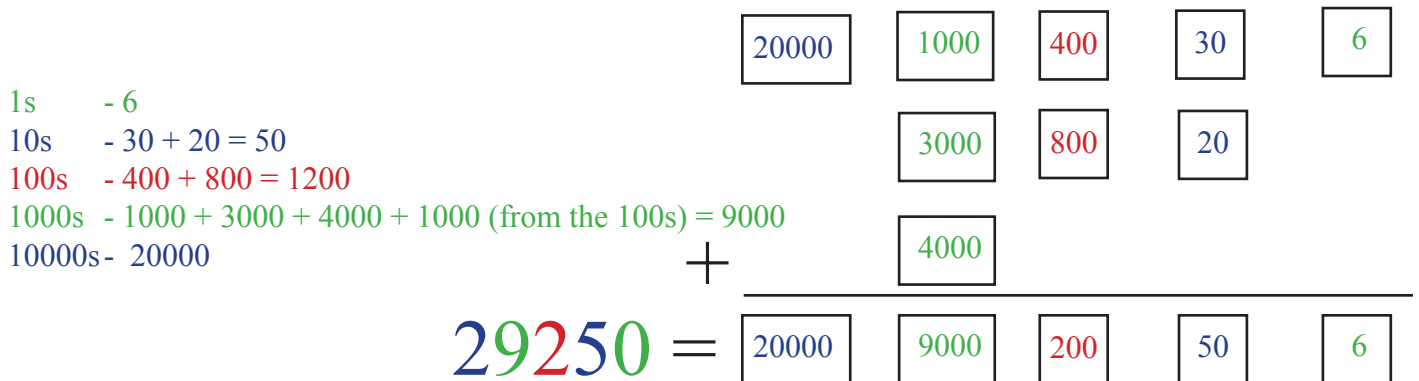
Step 5: Now move the 6 down to the 100s and multiplay out $800 \times 6 = 4800$



Step 6: Now move the 6 down to the 1000s and multiplay out $4000 \times 6 = 24000$. Since we have already used the 4000 the student needs to use tiles to equal the 4000 .



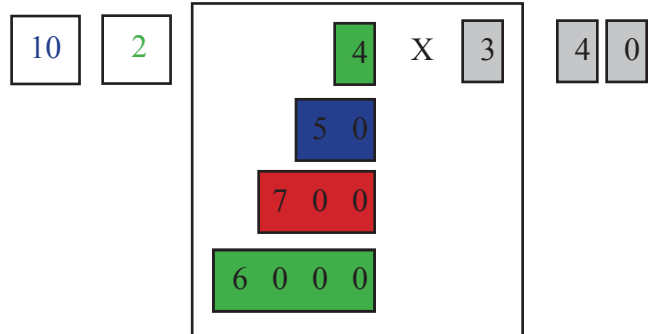
Step 7: Using these numbers, combine, exchange and simplify. $30 + 20 = 50$ so we would grab the 50s card from the bank



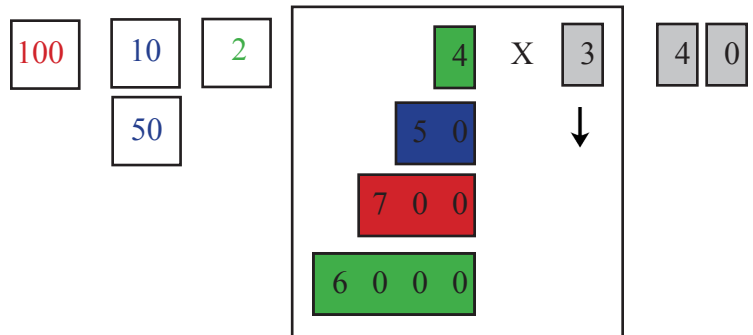
Step 1: Using the same bank layout as before, have the student lay out the equation: $6,754 \times 43$. The student would have a gray 0 card under the 3.



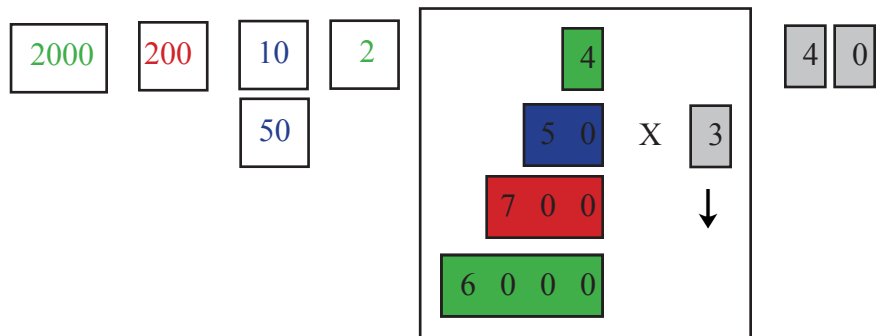
Step 2: Move the 40 off to the side to use later and multiply the $4 \times 3 = 12$. Using the tiles, lay out the number.



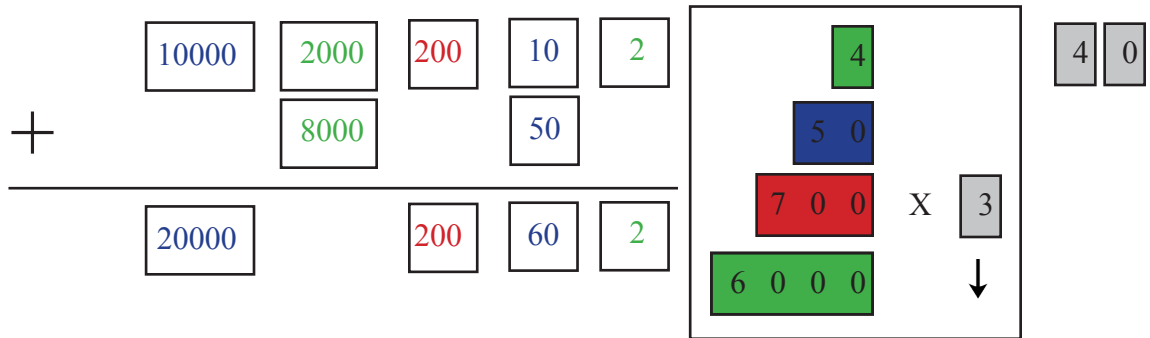
Step 3: Move the 3 down to the 10s and continue to multiply. $50 \times 3 = 150$. Lay out the number.



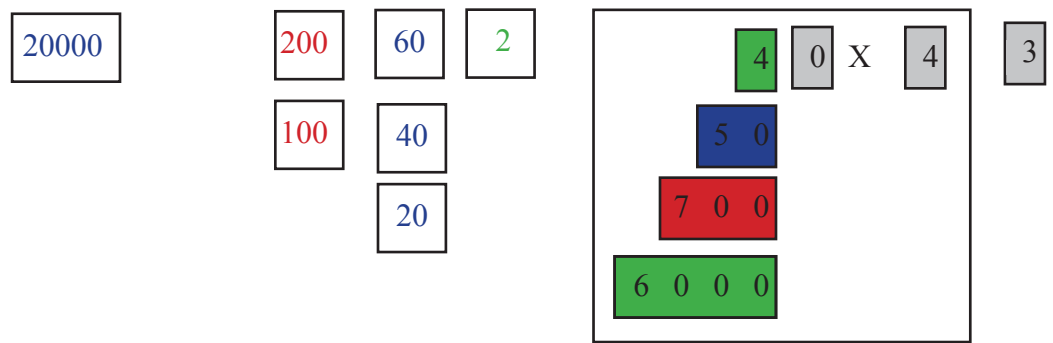
Step 3: Move the 3 down to the 100s and continue to multiply. $700 \times 3 = 2100$. In this instance since we have already used the 100 tile, we substitute the two 100s for a 200 tile. Lay out the number.



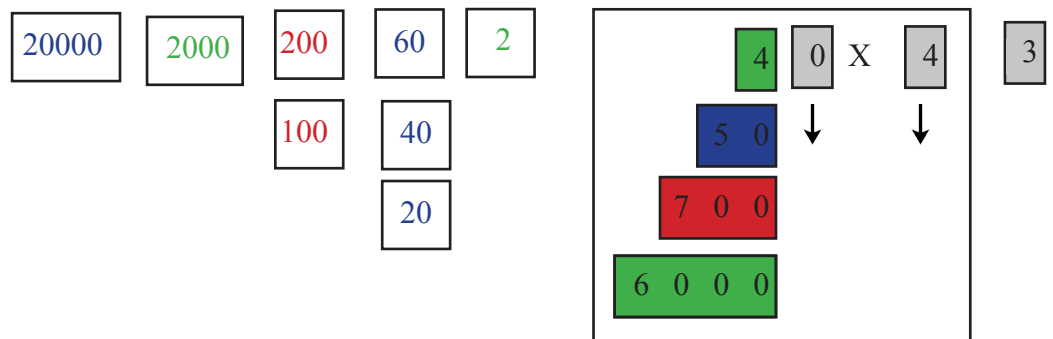
Step 4: Move the 3 down to the 1000s and continue to multiply. $6000 \times 3 = 18000$. Lay out the number. Since this is the final number for the 3 we would exchange and simplify.



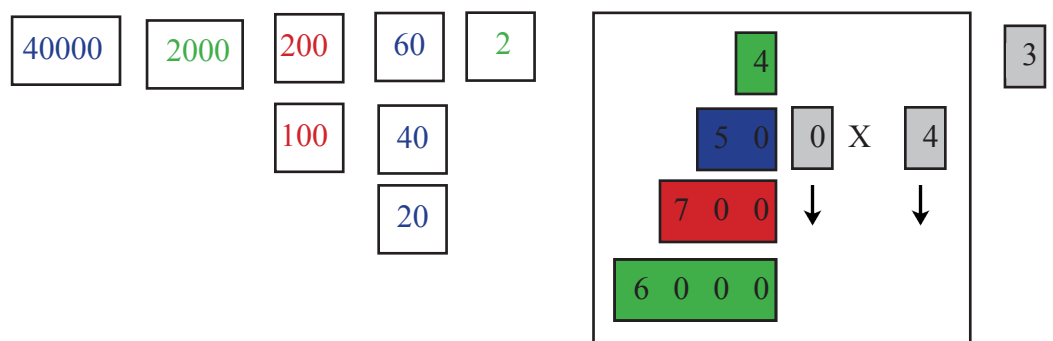
Step 5: Carrying down 20262 we would replace the 3 with the 40. Since we do not know our 40 times table, we use the magic zero rule and multiply the multiplicands by 10. The first problem is not 4×40 but $40 \times 4 = 160$. Lay out the number.



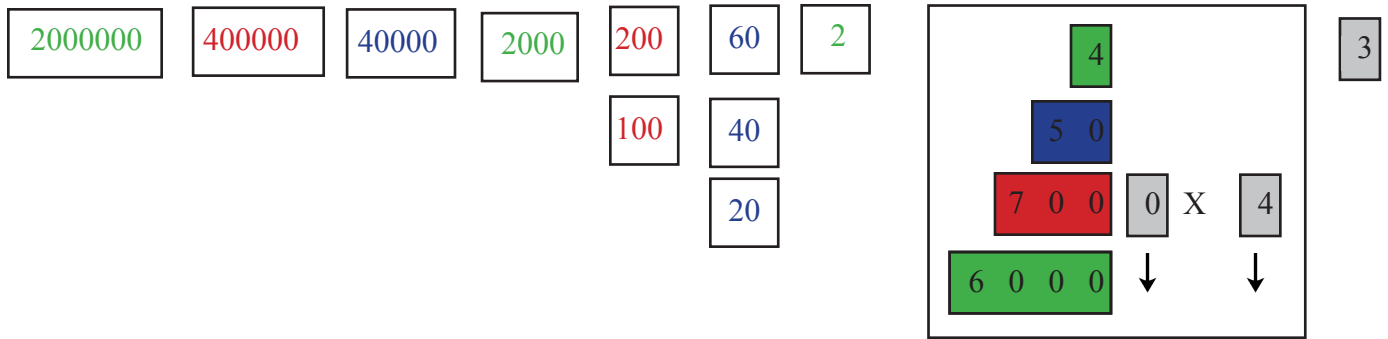
Step 6: Move down the 4 and the magic zero to the 10s and multiply. We now have $500 \times 4 = 2000$. Lay out the number.



Step 7: Move down the 4 and the magic zero to the 100s and multiply. We now have $7000 \times 4 = 28000$. since we already have a 20000 we combine them to create 40000. Lay out the number.



Step 8: Move down the 4 and the magic zero to the 1000s and multiply. We now have $60000 \times 4 = 2400000$. Lay out the number.



Step 9: Combine your numbers and you have the answer 2,442,422

1s	- 2	2000000	400000	40000	2000	200	60	2
10s	- 60 + 40 + 20 = 50							
100s	- 200 + 100 + 100(from 60 + 40) = 400							
1000s	- 2000					100	40	
10000s	- 40000						20	
100000s	- 400000							
1000000s	- 2000000							
+								
4,242,422		2000000	400000	40000	2000	400	20	2