







# Number Tricks


NCTM Standards 1, 2, 6, 7, 9

Seon Hwa and Se Ri drew diagrams for some steps of different number tricks. As you can see, they did not agree. Select and circle the correct diagram for each step.

	Words	Seon Hwa's Diagram	Se Ri's Diagram
1	Multiply a number by 3		
2	Multiply a number by 2 and add 6		
3	Add 2 to a number and multiply the sum by 3		

Here's another number trick.

- 4 Complete the table, first by choosing any number. Then, figure out the starting number if the result is 59.



Words	Diagram	Shorthand	Number
1. Pick a whole number.		$N$	
2. Multiply the number by 2.			
3. Add 3.			
4. Multiply by 5.			
5. Subtract 6.			59

- 5 When using this trick, what can you do to the final result to find the original number?

- 6 For a fundraiser, Grades 3, 4, and 5 at Michael's school sold pool and beach toys. Together they raised \$934! The fifth graders raised \$52 more than the third graders, and the fourth graders raised \$30 more than the third graders.



Fill in this table to find how much each grade raised.

Grade	Picture	Shorthand	Amount Raised
3		$x$	\$
4	 <span style="border: 1px solid black; padding: 2px;">\$30</span>		\$
5			\$
All three grades			\$934



- 7 **Challenge** For another fundraiser, the third graders raised \$23 more than the fifth graders, and the fourth graders raised \$71 more than the fifth graders. Together, they raised \$1,054. How much did each grade raise? Explain.

Grade 3:  Grade 4:  Grade 5: