

Pick a Number Magic Show



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Pick a Number Magic Show

7

3



4

15

n

-2



Pick a Number Magic Show

This is a wonderful way to bring excitement into a classroom, invigorate the curriculum, and empower students.

So pick a number.

Make your number “easy to work with.”



Pick a Number Magic Show

Magic Trip # 1

1. Add 4 to your number.



Pick a Number Magic Show

Magic Trip # 1

1. Add 4 to your number.
2. Multiply your result by 2.



Pick a Number Magic Show

Magic Trip # 1

1. Add 4 to your number.
2. Multiply your result by 2.
3. Now subtract 4.



Pick a Number Magic Show

Magic Trip # 1

1. Add 4 to your number.
2. Multiply your result by 2.
3. Now subtract 4.
4. Divide your result by 2.



Pick a Number Magic Show

Magic Trip # 1

1. Add 4 to your number.
2. Multiply your result by 2.
3. Now subtract 4.
4. Divide your result by 2.
5. Subtract your original number.



Pick a Number Magic Show

Magic Trip # 1

1. Add 4 to your number.
2. Multiply your result by 2.
3. Now subtract 4.
4. Divide your result by 2.
5. Subtract your original number.
6. Compare answers with your neighbor.



Pick a Number Magic Show

Magic Trip # 2

1. Add 8 to your number.



Pick a Number Magic Show

Magic Trip # 2

1. Add 8 to your number.
2. Multiply your result by 2.



Pick a Number Magic Show

Magic Trip # 2

1. Add 8 to your number.
2. Multiply your result by 2.
3. Now subtract 4.



Pick a Number Magic Show

Magic Trip # 2

1. Add 8 to your number.
2. Multiply your result by 2.
3. Now subtract 4.
4. Divide your result by 2.



Pick a Number Magic Show

Magic Trip # 2

1. Add 8 to your number.
2. Multiply your result by 2.
3. Now subtract 4.
4. Divide your result by 2.
5. Subtract your original number.



Pick a Number Magic Show

Magic Trip # 2

1. Add 8 to your number.
2. Multiply your result by 2.
3. Now subtract 4.
4. Divide your result by 2.
5. Subtract your original number.
6. Compare answers with your neighbor.



Pick a Number Magic Show

Algebra Trip #1 - suppose you picked n

1. Add 4 to your number. $n+4$
2. Multiply your result by 2. $2n+8$
3. Now subtract 4. $2n+4$
4. Divide your result by 2. $n+2$
5. Subtract your original number. 2
6. You always end up with 2 !



Pick a Number Magic Show

Algebra Trip #2 - suppose you picked x

1. Add 8 to your number. $x+8$
2. Multiply your result by 2. $2x+16$
3. Now subtract 4. $2x+12$
4. Divide your result by 2. $x+6$
5. Subtract your original number. 6
6. You always end up with 6 !



Pick a Number Magic Show

You can be a magician too !

CA Algebra 1 Standard 1.1

1.1 Students use **properties of numbers** to demonstrate whether assertions are true or false.

CA Algebra 1 Standard 1.1

4.0 Students **simplify expressions** before solving linear equations and inequalities in one variable . . .



Pick a Number Magic Show

You can be a magician too !

After showing your students how the algebra works in these magic shows, **challenge them** to make their own magic!

Ask them to write a script that makes the final answer always equal to 5, for instance.



Pick a Number Magic Show

Brothers, Sisters, and Grandparents

1. Write down the number of brothers you have.



Pick a Number Magic Show

Brothers, Sisters, and Grandparents

1. Write down the number of brothers you have.
2. Multiply by 2.



Pick a Number Magic Show

Brothers, Sisters, and Grandparents

1. Write down the number of brothers you have.
2. Multiply by 2.
3. Add 3.



Pick a Number Magic Show

Brothers, Sisters, and Grandparents

1. Write down the number of brothers you have.
2. Multiply by 2.
3. Add 3.
4. Multiply by 5.



Pick a Number Magic Show

Brothers, Sisters, and Grandparents

1. Write down the number of brothers you have.
2. Multiply by 2.
3. Add 3.
4. Multiply by 5.
5. Add the number of sisters you have.



Pick a Number Magic Show

Brothers, Sisters, and Grandparents

1. Write down the number of brothers you have.
2. Multiply by 2.
3. Add 3.
4. Multiply by 5.
5. Add the number of sisters you have.
6. Multiply by 10.



Pick a Number Magic Show

Brothers, Sisters, and Grandparents

1. Write down the number of brothers you have.
2. Multiply by 2.
3. Add 3.
4. Multiply by 5.
5. Add the number of sisters you have.
6. Multiply by 10.
7. Add the number of living grandparents.



Pick a Number Magic Show

Brothers, Sisters, and Grandparents

1. Write down the number of brothers you have.
2. Multiply by 2.
3. Add 3.
4. Multiply by 5.
5. Add the number of sisters you have.
6. Multiply by 10.
7. Add the number of living grandparents.
8. Subtract 150.



Pick a Number Magic Show

Brothers, Sisters, and Grandparents

Now look at the number you have in front of you.

The **first digit** is the number of brothers you have.



Pick a Number Magic Show

Brothers, Sisters, and Grandparents

Now look at the number you have in front of you.

The first digit is the number of brothers you have.

The **second digit** is the number of sisters you have.



Pick a Number Magic Show

Brothers, Sisters, and Grandparents

Now look at the number you have in front of you.

The first digit is the number of brothers you have.

The second digit is the number of sisters you have.

The **third digit** is the number of living grandparents you have.

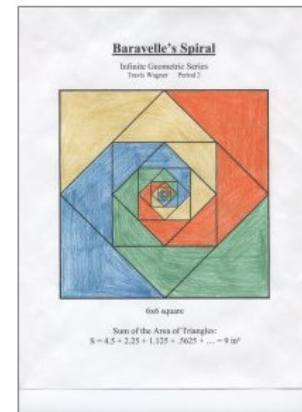
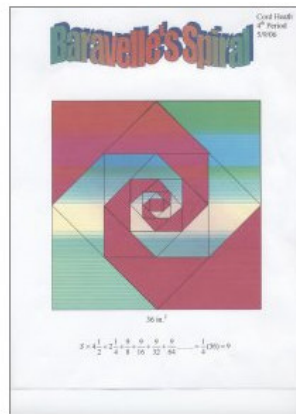
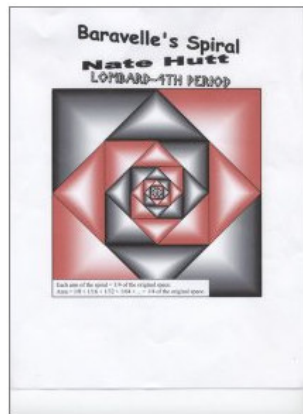
NOTE: This works only if you have **less than 10 brothers and 10 sisters.**



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