


## Choose a # from 1 to 20.

- Double your original number.
- Add 6.
- Divide by 2.
- Subtract the original number from the new number.
- Fold the paper once so your work/answer cannot be seen.



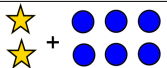
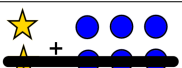
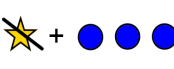
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## Did you get 3...?



See if you can figure out why.

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Visual	Verbal	Equation
	Choose a Number	$x$
	Double the Number	$2x$
	Add 6	$2x + 6$
	Divide By 2	$(2x + 6) \div 2$ $= x + 3$
	Subtract your original #	$x + 3 - x = 3$

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### Guess My Birthday!

INCLUDED IN THE STUDENT MANUAL

Do you believe that I can figure out your birthday by using simple math?  
Get a calculator and ask your classmate to try the following. Your classmate must press equal (or enter) between every step.  $x = \text{month}$   $y = \text{day}$

- a) Enter the month of his/her birth into the calculator. (Ex: enter 5 for May)
- b) Multiply that number by 7.  $7x$
- c) Subtract 1 from that result.  $7x - 1$
- d) Multiply that result by 13.  $13(7x - 1) = 91x - 13 + y$
- e) Add the day of birth. (Ex: For June 14th add 14)  $+ 3$
- f) Add 3.
- g) Multiply by 11.  $11(91x - 10 + y)$
- h) Subtract the month of birth.  $1000x - 110 + 11y$
- i) Subtract the day of birth.  $-x - y$
- j) Divide by 10.  $\frac{1000x - 110 + 10y}{10}$
- k) Add 11.
- l) Divide by 100.  $\frac{100x - 11 + y}{10}$

Can you find a pattern here?

$\frac{100x + y}{100} = x.y$

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## Homework!

Create your own "Magic Trick."  
~ Due: Mon. 8/28

1. Come up with your own "magic trick" like our intro activity that includes at least 5 steps.
2. Include a visual, verbal, and mathematical representation for each step.

Aug 25-4:03 PM