## It's Not Magic-It's Math!



Often number tricks appear magical, but mathematics can usually explain why the tricks work.

Follow these instructions.

| Choose any two numbers from the following list: <br> $1,2,3,4,5,6,7,8,9$ |
| :---: |
| Multiply either number by 5. |
| Add 3 to your answer. |
| Double the sum you just wrote. |
| Add to it, the other number you started with. |
| When I call on you, tell me your final number. |
| I will immediately tell you your 2 original numbers. |

Use mathematics to show how and why this works.

## Telephone Number



Often number tricks appear magical, but mathematics can usually explain why the tricks work.

Follow these instructions.

| Key into your calculator the first three digits of your <br> telephone number (NOT the area code). <br> Multiply by 80. <br> Add 1. <br> Multiply by 250. <br> Add the last 4 digits of your phone number. <br> Add the last 4 digits of your phone number again. <br> Subtract 250. <br> Divide the amount by 2. |
| :---: |

Use mathematics to show how and why this works.

## Secret Number Trick 1



SECRET

Follow these instructions.
Write any two-digit secret number on your paper.
Double it.
Add 9.
Add your secret number. Divide by 3.

Add 3.
Tell me what you have, and I will tell you your secret number.

Use mathematics to show how and why this works.

## Secret Number Trick 2



SECRET

Follow these instructions.

| Write any secret number on your paper. |
| :---: |
| Add 3. |
| Multiply by 2. |
| Add 4. |
| Divide by 2. |
| Tell me what you have, |
| and I will tell you your secret number. |

Use mathematics to show how and why this works.

## Secret Number Trick 3



Follow these instructions.

| Write any secret number on your paper. |
| :---: |
| Add the next larger number. |
| Add 7. |
| Divide by 2. |
| Tell me what you have, |
| and I will tell you your secret number. |

Use mathematics to show how and why this works.

## Secret Number Trick 4



Follow these instructions.

| Write any secret number on your paper. |
| :---: |
| Add 10. |
| Subtract 3. |
| Add 5. |
| Subtract 11. |
| Tell me what you have, |
| and I will tell you your secret number. |

Use mathematics to show how and why this works.

## Secret Number Trick 5



Follow these instructions.

| Write any secret number on your paper. |
| :---: |
| Add the next larger number. |
| Subtract 1. |
| Multiply by 5. |
| Tell me what you have, |
| and I will tell you your secret number. |

Use mathematics to show how and why this works.

## Secret Number Trick 6



Follow these instructions.

Write any secret number on your paper.
Add the number on either side of it.

> Tell me what you have, and I will tell you your secret number.

Use mathematics to show how and why this works.

