

Nerdo the Mathnificant You Say It's Your Birthday

Overview

This algebraic based trick allows you to guess a person's birthday.
The follow up to this is to have students create their own trick for guessing birthdays.

Materials

Paper and pencil
Overhead
Birthday present
Calculator

Steps

1. Have volunteer (V) stay at seat and follow the following steps.
2. Take month and multiply by 5
3. subtract 6
4. Multiply by -4
5. subtract 57
6. multiply by -5
7. add the day of the month for birthday.
8. Tell Nerdo the number
9. Nerdo subtracts 165 from the number. The last two digits are the day and the others are the month.
10. Let groups take time to find out why.

Math

1. $m = \text{month}$
2. $5m$
3. $5m - 6$
4. $-4(5m - 6) = -20m + 24$
5. $-20m + 24 - 57 = -20m - 33$
6. $-5(-20m - 33) = 100m + 165$
7. $100m + 165 + d$

Example

1. 11
2. $5 * 11 = 55$
3. $55 - 6 = 49$
4. $-4 * 49 = -196$
5. $-196 - 57 = -253$
6. $-5 * -253 = 1265$
7. $1265 + 29 = 1294$
8. $1294 - 165 = 1129$, November 29th

You Say It's Your Birthday

$m = \text{month}$

$5m$

$5m-6$

$-4(5m-6) = -20m + 24$

$-20m + 24 - 57 = -20m - 33$

$-5(-20m - 33) = 100m + 165$

$100m + 165 + d$

