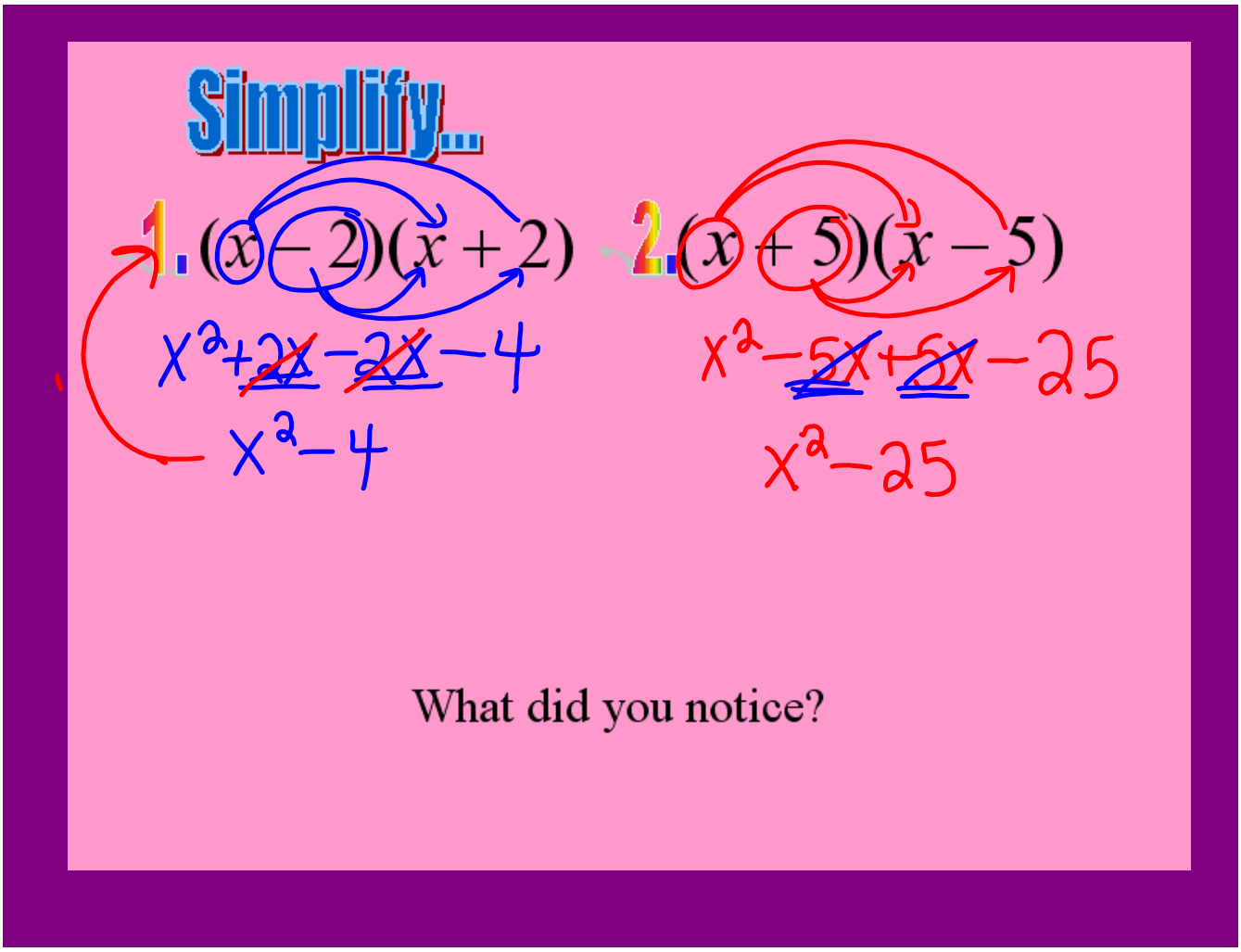
Simplify...
1. $(x-2)(x+2)$
$x^2+2x-2x-4$
x^2-4
2. $(x+5)(x-5)$
$x^2-5x+5x-25$
x^2-25
What did you notice?

Difference of Squares!

Factor:

1. $x^2 - 16$

$(x)^2 - (4)^2$

$= (x+4)(x-4)$

Difference of Squares!

Factor:

2. $-25 + z^2$

$z^2 - 25$

$(z)^2 - (5)^2$

$(z+5)(z-5)$

$36x^2 - 49$

$(6x)^2 - (7)^2$

$(6x+7)(6x-7)$

$64y^2x^2 - 16z^2$

$(8yx)^2 - (4z)^2$

$(8yx+4z)(8yx-4z)$

$r^8 - 100$

$(r^4)^2 - (10)^2$

$(r^4 + 10)(r^4 - 10)$

$81m^2 - 25n^4$

$(9m)^2 - (5n^2)^2$

$(9m + 5n^2)(9m - 5n^2)$

Try these...

1. $x^2 - 100$

$(x)^2 - (10)^2$

$(x+10)(x-10)$

2. $-36 + y^2$

$y^2 - 36$

$(y)^2 - (6)^2$

$(y+6)(y-6)$

3. $81x^2 - 49b^2$

$(9x)^2 - (7b)^2$

$(9x+7b)(9x-7b)$

4. $(Math)^2 - 4$

$(Math)^2 - (2)^2$

$(Math+2)(Math-2)$

5. $\frac{9}{64} - z^2$

$(\frac{3}{8})^2 - (z)^2$

$(\frac{3}{8}+z)(\frac{3}{8}-z)$

6. $p^{10} - 64$

$(p^5)^2 - (8)^2$

$(p^5+8)(p^5-8)$

The ultimate question!

$$(x-3)^2 - 25(w+2)^2$$