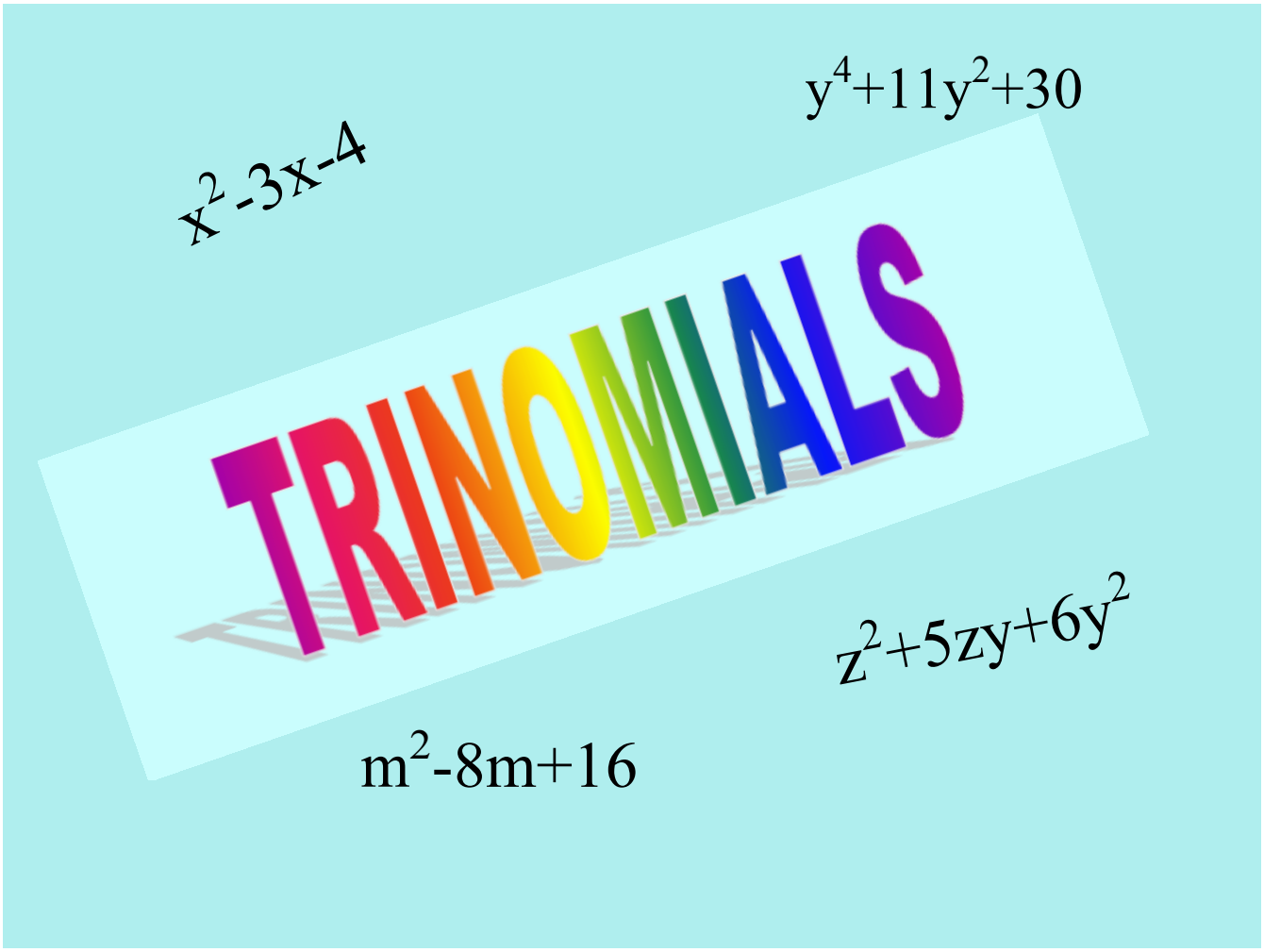

x^2-3x-4
y^4+11y^2+30
TRINOMIALS
$z^2+5zy+6y^2$
$m^2-8m+16$

Expand:

$(x+2)(x+1)$

$x^2+1x+2x+2$

$= x^2+3x+2$

$(x+5)(x-4)$

$x^2-4x+5x-20$

$= x^2+1x-20$

$(x-7)(x-1)$

$x^2-x-7x+7$

$= x^2-8x+7$

Work sdrawkcab

1. x^2+1x-6

$3 + -2 = 1$

$3 \times -2 = -6$

Find two numbers that ***add*** to give 1 and ***multiply*** to give -6.

$(x+3)(x-2)$

Check

$x^2 - 2x + 3x - 6$

x^2+1x-6 ✓

Factoring Trinomials

$x^2 - 5x + 6$ — Same

$-2 \times -3 = 6$

$-2 + -3 = -5$

$(x-2)(x-3)$

$y^2 + y - 72$ — Big, Different

$9 \times -8 = -72$

$9 + -8 = +1$

$(y+9)(y-8)$

$w^2 + 16w + 39$

$13 \times 3 = 39$

$13 + 3 = 16$

$(w+13)(w+3)$

$x^2 - 6xy + 9y^2$

$-3 \times -3 = 9$

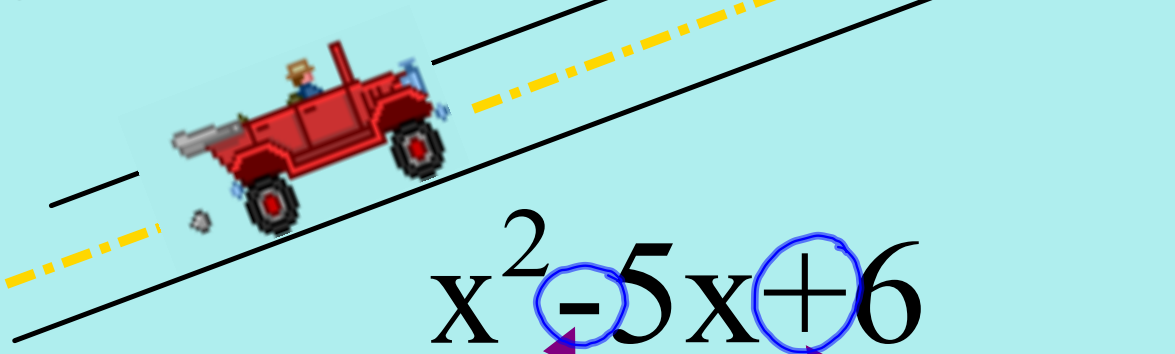
$-3 + -3 = -6$

$(x-3y)(x-3y)$

$(x-3y)^2$

Rules of the road...

Signs are the Same!



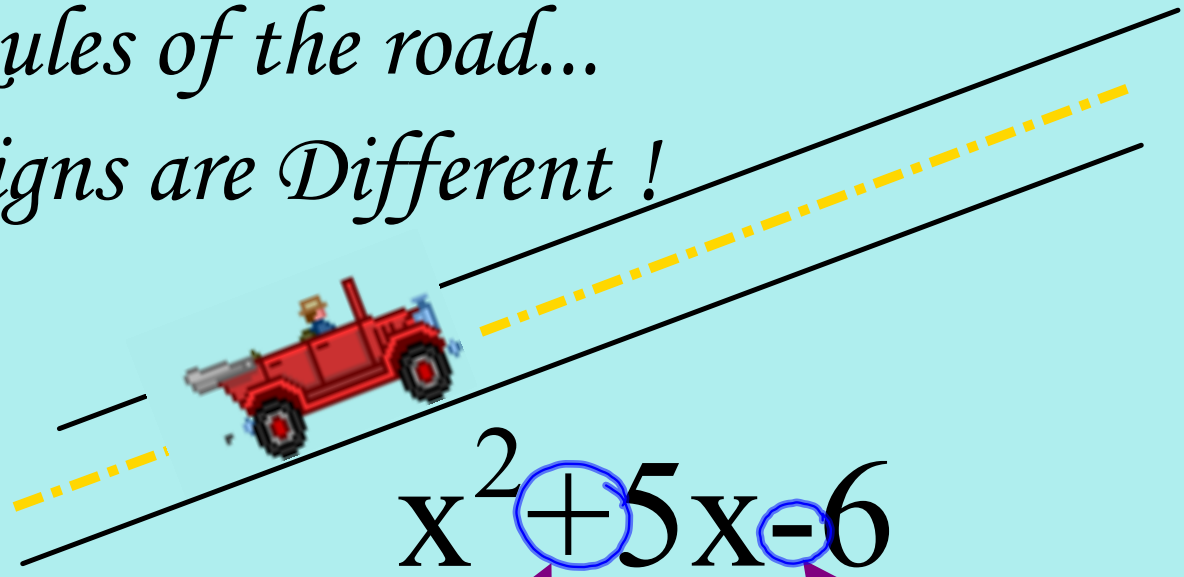
$$x^2 - 5x + 6$$

Sign of both Numbers.

Signs are the same.

Rules of the road...

Signs are Different !



$$x^2 + 5x - 6$$

Sign of the biggest number.

Signs are different.

Tricky!! $x^2-6xy+9y^2$

$(x-3y)(x-3y)$

$-3 \times -3 = 9$

$-3 + -3 = -6$

Super Duper Tricky!!

y^4+y^2-72