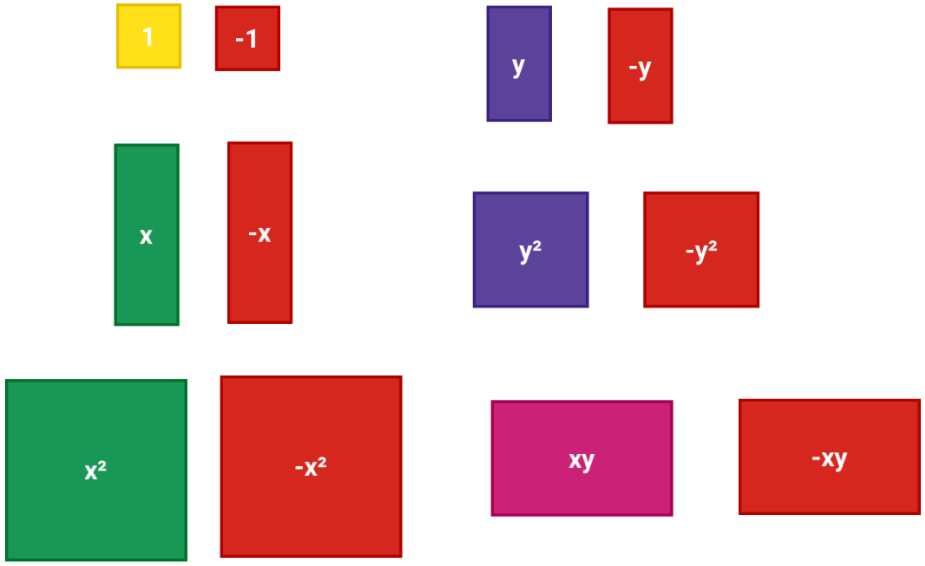
Algabra tile modles



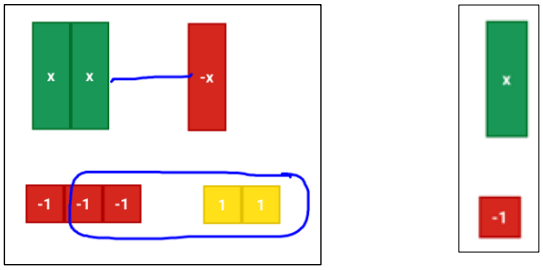

Example

$-x^2 + 2x - 2$

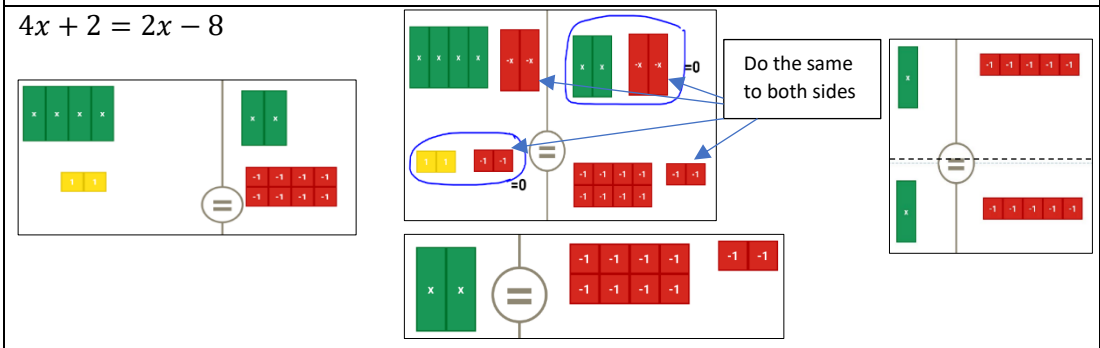

Model the following equations by sketching the algebra tiles.

| $-2x + 3$ | $-3y + 2x - 2$ | $2y^2 - x^2 + 3xy - 3$ |
|---|---|---|
| | | |

Simplify the following by sketching the algebra tiles, showing grouping of like terms and the mathematical procedure (algorithm)

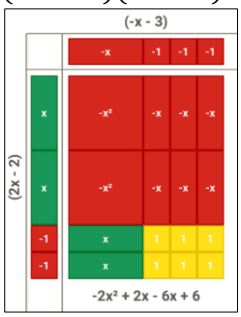
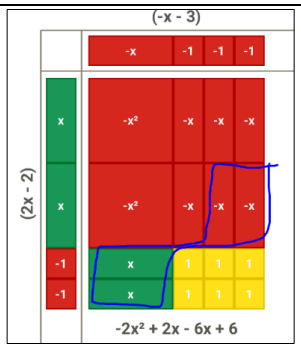
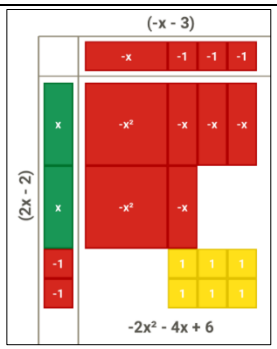
| Equation & Simplify | Diagram |
|---|---|
| $2x - 3 - x + 2$<br><br>$x - 1$ |   |
| $2x + 7x - 5x$ | |
| $-2x + 3 - x + 2x^2 + 5$ | |
| $3x^2 - 3x - x^2 + x - 7$ | |
| $8xy + 7x - 9yx - 5x + 4$ | |

Solve the following by sketching the algebra tiles, showing grouping of like terms, zero pairs, and division and the mathematical procedure (algorithm)

| Equation & Diagram | Mathematical Procedure |
|---|---|
| $4x + 2 = 2x - 8$   | $4x + 2 = 2x - 8$<br>$-2x \quad -2x$ =0<br>$2x + 2 = -8$<br>$-2 \quad -2$<br>=0<br>$\frac{2x}{2} = \frac{-10}{2}$ $x = -5$ |
| $4x + 2 = 14$ | |
| $5x - 3 = 2x + 9$ | |
| $3x + 7 = -3 - x - 2$ | |
| $7y + 12 - 2y = 2y - 3$ | |

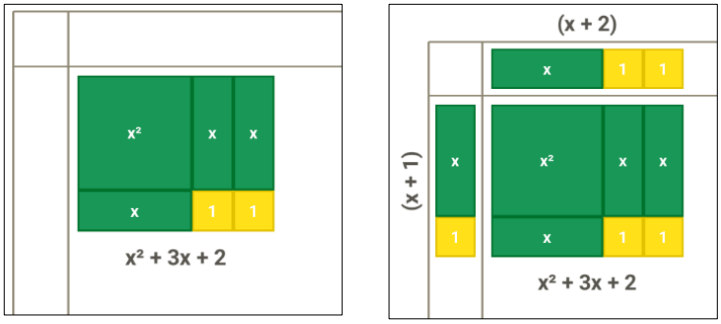
Visual Math Algebra Tiles

Multiply the following by sketching the algebra tiles, showing simplified solution and the mathematical procedure (algorithm)

| Equation | Diagram | Mathematical Procedure |
|---|---|---|
| $(-x-3)(2x-2)$   |     | $(-x-3)$<br>$\underline{(2x-2)}$<br>$2x+6$<br>$\underline{-2x^2-6x\quad}$<br>$-2x^2-4x+6$ |
| $3(-3x-1)$ | | |
| $(-x-2)(x+4)$ | | |
| $(-2x+3)(-3x-1)$ | | |
| $(2x-3)(2y+2)$ | | |

Visual Math Algebra Tiles

Factor the following by making a rectangle with algebra tiles. Then add tiles on the sides to find the factors.

| Equation | Diagram | Explanation |
|---|---|---|
| $x^2 + 3x + 2$ |   | $2 \cdot 1 = 2$<br>$2 + 1 = 3$<br><br>Therefore<br>$(x + 1)(x + 2)$ |
| $x^2 + 6x + 5$ | | |
| $x^2 - x - 2$<br><br>*Note you may need to add zero pairs to make the rectangle* | | |
| $x^2 - 4x + 3$ | | |