Friday 2/21

Solve the given proportions.

1. $9\left(\frac{x-1}{3}\right) = \frac{2x+1}{9}$

$\frac{1}{3} \cdot \frac{9}{1}$ $\frac{9}{3}=3$ $3x-3=2x+1$

$-2x$ $-2x$

$x-3=1$

$+3$ $+3$

$\boxed{x=4}$

2.

3	2
x	$x-6$

$2x = 3(x-6)$

$2x = 3x-18$

$-3x$ $-3x$

$-1(-x = -18)$

$\boxed{x = 18}$

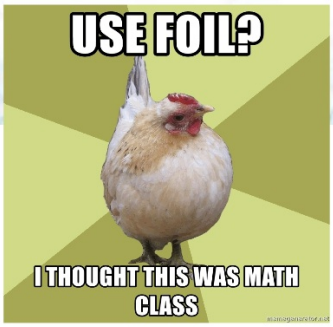
Multiplying by Distribution

PLAN

(P+L)(A+N)

PA+PN+LA+LN

Your plan has been foiled



Distributive method

F – **First** Terms - Multiply the first terms of each binomial.

O – **Outside** Terms – Multiply the outer terms.
(This is the first term in the first binomial and the last term in the second binomial.)

I – **Inside** Terms – Multiply the inside terms.
(This is the second term in the first binomial and the first term in the second binomial.)

L – **Last** Terms – Multiply the last terms in each binomial.

Use the distributive method to mutliply the binomials.

$(x + 6)(x + 1) =$ $x^2 + 7x + 6$

F = x^2

O = x

I = $6x$

L = 6

Use the distributive method to mutliply the binomials.

$(x - 6)(x + 1) =$ $x^2 - 5x - 6$

F = x^2

O = x

I = $-6x$

L = -6

$-5x$

Use the distributive method to mutliply the binomials.

$(12y - 3)(11y + 6) =$ $132y^2 + 39y - 18$

F = $132y^2$

O = $72y$

I = $-33y$

L = -18

$39y$

Use the distributive method to mutliply the binomials.

$(3y - 4z)(y - z) = +3y^2 - 7yz + 4z^2$

F $= 3y^2$

O $= -3yz$

I $= -4zy$

L $= +4z^2$

$$(2n + 2)(6n + 1) = 12n^2 + 14n + 2$$

F = $12n^2$

O = $2n$

I = $12n$ = $14n$

L = 2

$$(4n + 1)(2n + 6)$$

$F = 8n^2$

$O = 24n$

$I = 2n$

$L = 6$

$8n^2 + 26n + 6$

$$(x-3)(6x-2)$$

$F = 6x^2$

$O = -2x$

$I = -18x$

$L = 6$

$6x^2 - 20x + 6$

$$(8p-2)(6p+2) = 48p^2 + 4p - 4$$

F $48p^2$

O $16p$

I $-12p$

L -4

$$(3m - 1)(8m + 7)$$

$F = 24m^2$

$O = 21m$

$I = -8m$

$L = -7$

$24m^2 + 13m - 7$