

Starter  $X \cdot X \cdot X = X^3$  2 FEB 2018  
 Multiply and simplify.

1)  $(3x^2 - 3x + 2)(-4x + 2)$

$-4x$	$-12x^3$	$12x^2$	$-8x$
$2$	$6x^2$	$-6x$	$4$

$(-12x^3 + 18x^2 - 14x + 4)$

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

$x$	$x^2$	$3x$
$3$	$3x$	$9$

$x^2 + 6x + 9$

YOU DO:  $(4y-3)^2 =$

Geometry Applications:  $A = l \cdot w$   
 I DO:  
 The length of a rectangular swimming pool is  $(2x-1)$  meters and the width is  $(3x+1)$  meters. Write a polynomial that represents the area of the swimming pool.

$(2x-1)m$   $(3x+1)m$   $A = (3x+1)(2x-1)$

$2x$	$6x^2$	$2x$
$-1$	$-3x$	$-1$

$A = 6x^2 - x - 1$

YOU DO: Given the rectangle below.  $A = (4x+6)(4x-3)$

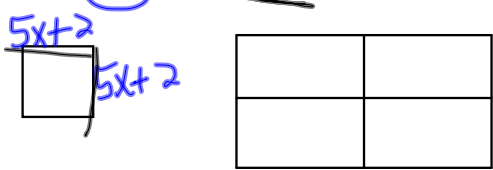
	$(4x+6)$ feet
$(4x-3)$ feet	

$4x$	$16x^2$	$24x$
$-3$	$-12x$	$-18$

$A = 16x^2 + 12x - 18$

WE DO:

Find the area of the square with a side of  $(5x+2)$  feet.



The diagram shows a square with its top and right sides labeled  $5x+2$ . To the right of the square is a 2x2 grid of empty boxes, intended for a student to draw a larger square with side length  $5x+2$  and partition it into four regions to find the area.

Functions and polynomials

WE DO:

Find the product  $f(x) \cdot g(x)$  for the functions  $f(x) = x^2 - 3x + 4$  and  $g(x) = x + 1$

$f(x) \cdot g(x) = (x^2 - 3x + 4)(x + 1)$

$1x^2$	$x^3$	$-3x^2$	$4x$
$1$	$x^2$	$-3x$	$4$

$x \cdot x \cdot x = x^3$

$x^3 - 2x^2 + x + 4$

Homework: Multiplying Polynomials. Draw the boxes if you choose to use them.

1)  $(5x - 8)(2x - 3)$

2)  $(n + 1)(n - 7)$

3)  $(3x - 7)(x - 2)$

4)  $(3d - 2)(-d^2 - 3d + 2)$

5)  $(x - 2)(x + 2)$

6) Find the area of the rectangle.

$(3x - 2)h$

$(x - 2)h$

