Name_____ Pd_____ Date_____ **Section 2P8**

Geometry Applications

Shape	Area (all space inside)	Perimeter (length all around edges)
Rectangle	$A = LW$	$P = L + w + L + W$ $P = 2L + 2W$
Triangle	$A = \dfrac{1}{2}bh$	Add up all sides
Parallelogram	$A = bh$	Add up all sides
Square	$A = LW = s \cdot s = s^2$	$P = s + s + s + s$ $P = 4s$
Circle	$A = \pi r^2$	$C = 2\pi r$
L : length; W : width; b : base length; h : height; s : side length; r : radius; C : circumference			

Find the polynomial that represents the area of the shape with…
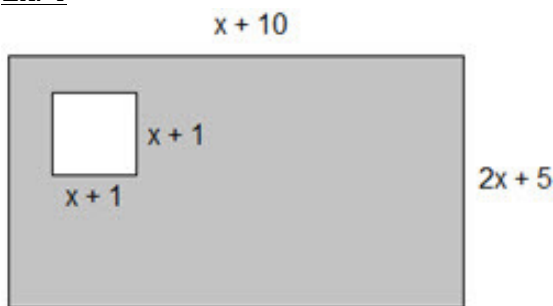
<u>Ex. 1</u>   triangle $b = 3x + 1$ and $h = 2x - 4$ <u>You Try 2</u>   triangle $b = 6x - 4$ and $h = 5x + 2$

What expressions represent the length and width of a rectangle with…

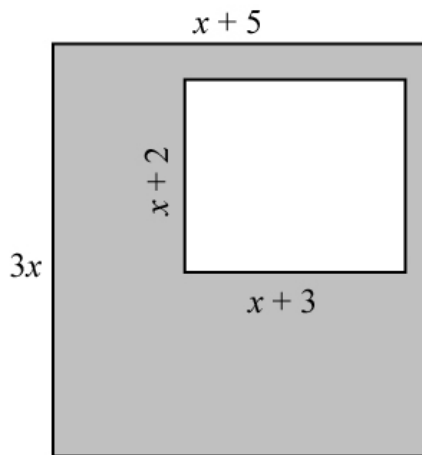<u>Ex. 3</u>   area is $k^2 - 8k + 16$ <u>You Try 3</u>   area is $9p^2 - 81$

What polynomial represents the area of the shaded region?

<u>Ex. 4</u>

x + 10

x + 1

x + 1

2x + 5

A rectangular field has a patch of dirt at the top right where nothing grows, as shown in the figure. What is the area of the space where crops do grow in the field?

$x + 5$

$x + 2$

$3x$

$x + 3$

What is the area of a circle with radius…

Ex. 7 $r = 3x - 4$ You Try 8 $r = 2x + 5$

What is the radius of a circle with area…

Ex. 9 $A = \pi(x^2 + 14x + 49)$ You Try 10 $A = \pi(x^2 - 20x + 100)$