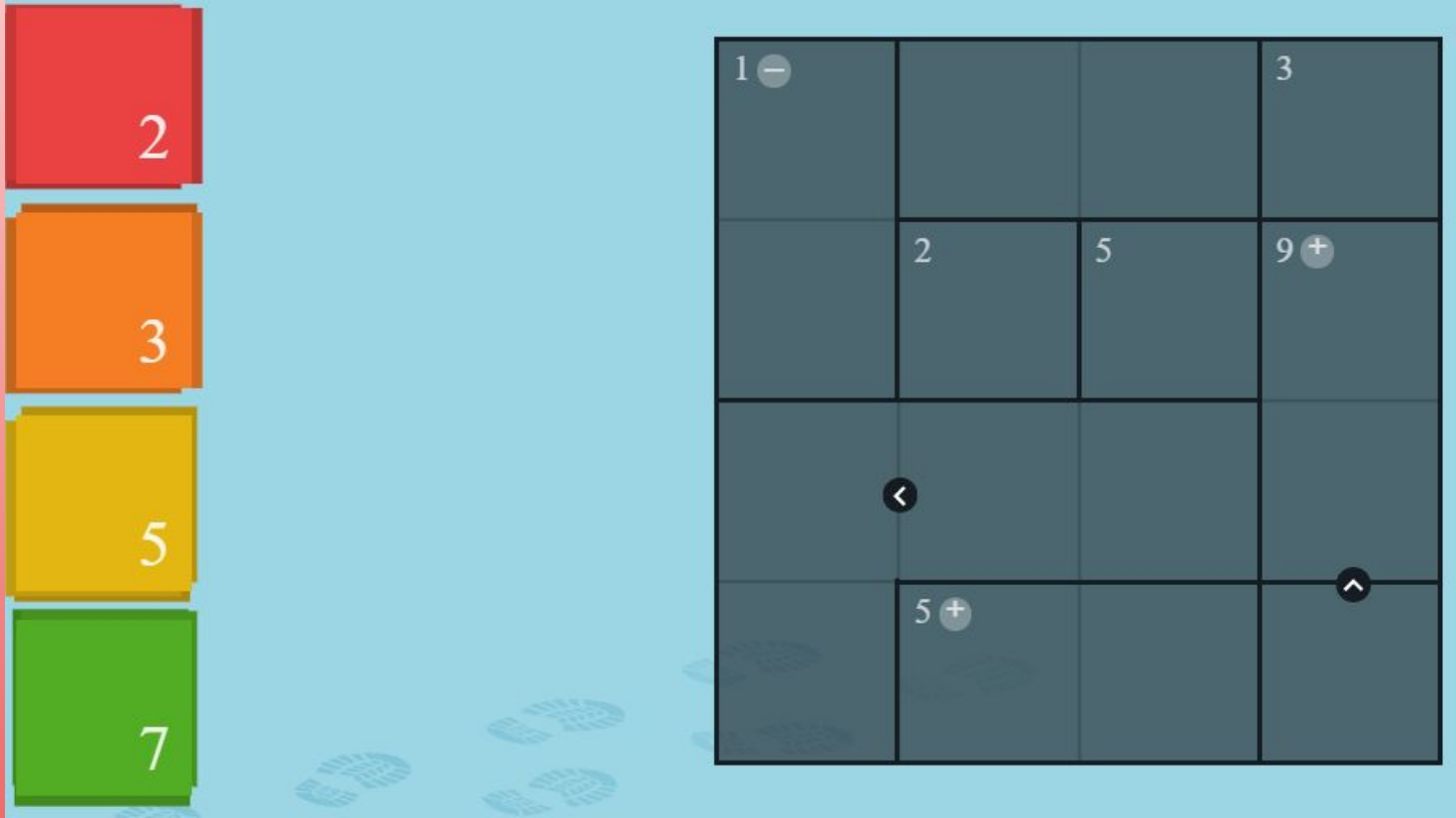**Math Virtual Learning**

HS/Essential Math II

May 18, 2020

High School/Essential Math 2
Lesson: May 18, 2020
(U4L7)

Objective/Learning Target

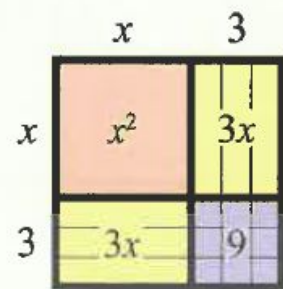Use mathematical reasoning to clearly and understandably square variables

Bellwork

Bellwork Answer

①

x 3

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

$(x + 3)(x + 3) =$

x^2 + [ ] + 9

②

	x	2
$2x$	$2x^2$	$4x$
3		

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

$2x^2$ + [ ] + [ ]

③

	x	y	2
x		xy	
y	xy	y^2	$2y$
1			
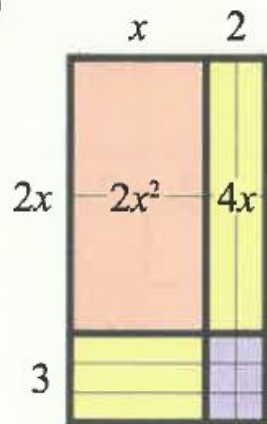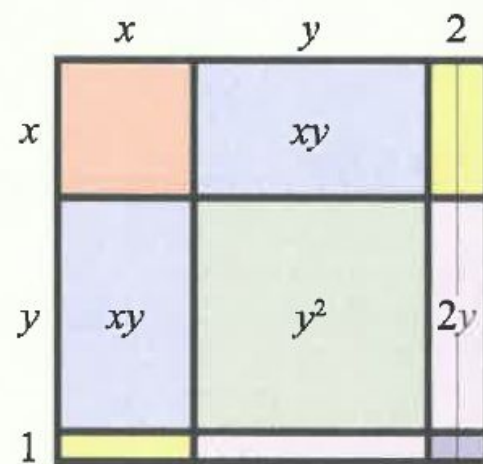
$(x + y + 1)(x + y + 2) =$

x^2 + [ ] + [ ]

+ [ ] + [ ] + [ ]

Lesson - Important Stuff

①

x 3

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

$(x + 3)(x + 3) =$

x^2 + $6x$ + 9

②

x 2

	x	2
$2x$	$2x^2$	$4x$
3		

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

$2x^2$ + $7x$ + 6

③

x y 2

	x	y	2
x		xy	
y	xy	y^2	$2y$
1			
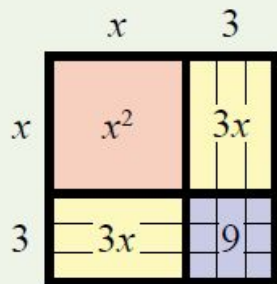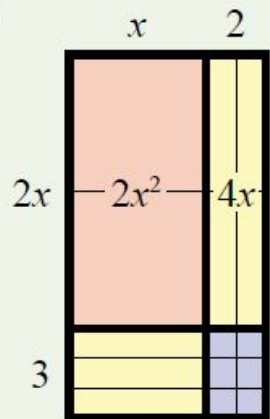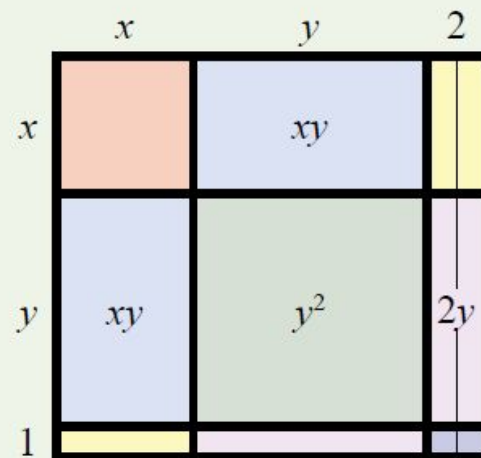
$(x + y + 1)(x + y + 2) =$
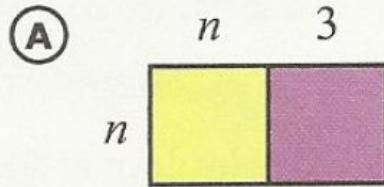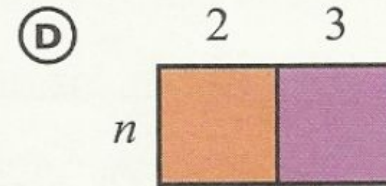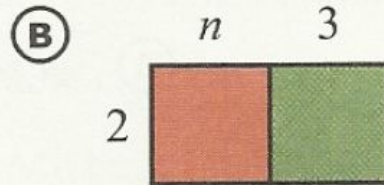
x^2 + $2xy$ + y^2

+ $3x$ + $3y$ + 2

Answers - Combine like terms and find patterns

Match each algebraic expression with an area model.

(15) $2(n + 6)$

(16) $n(2 + 3)$

(17) $2(n + 6)$

(18) $n(n + 3)$

(A)

	n	3
n		

(B)

	n	3
2		

(C)

	n	6
2		

(D)

	2	3
n		
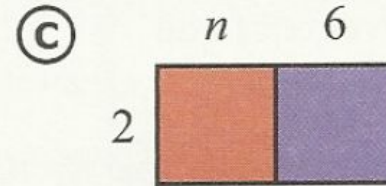
Use an area model to multiply

(20) $(3w + 6)(w - 5) = $ _____
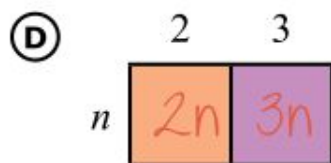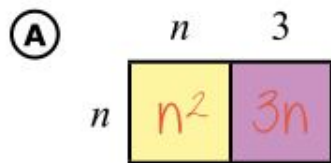
Stuff to Make You Think

Match each algebraic expression with an area model.

(15) $2(n + 6)$ **B**

(16) $n(2 + 3)$ **D**

(17) $2(n + 6)$ **C**

(18) $n(n + 3)$ **A**

(A)

	n	3
n	n^2	$3n$

(B)

	n	3
2	$2n$	6

(C)

	n	6
2	$2n$	12

(D)

	2	3
n	$2n$	$3n$
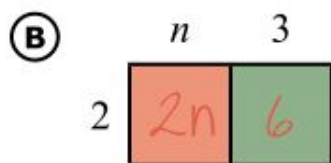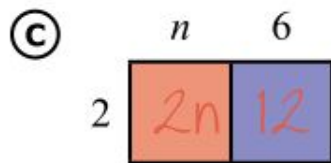
(20) $(3w + 6)(w - 5) =$ _$3w^2 - 9w - 30$_

	$3w$	6
w	$3w^2$	$6w$
-5	$-15w$	-30

ANSWERS
Stuff to Make You Think

Draw an area model and use it to multiply.

(A) $c(c+3) =$ _____

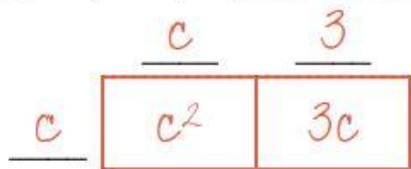(B) $3(c+3) =$ _____

(C) $x(x+y-7) =$ _____
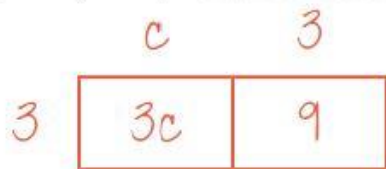
(D) $(c+3)^2 =$ _____

(E) $(4-p)(p-4) =$ _____

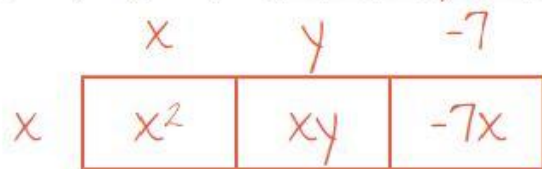# Additional Practice

Draw an area model and use it to multiply.

Ⓐ $c(c+3) = \underline{c^2 + 3c}$

	c	3
c	c^2	$3c$

Ⓑ $3(c+3) = \underline{3c + 9}$

	c	3
3	$3c$	9

Ⓒ $x(x+y-7) = \underline{x^2 + xy - 7x}$

	x	y	-7
x	x^2	xy	$-7x$

Ⓓ $(c+3)^2 = \underline{c^2 + 6c + 9}$

	c	3
c	c^2	$3c$
3	$3c$	9

Ⓔ $(4-p)(p-4) = \underline{-p^2 + 8p - 16}$

	p	-4
4	$4p$	-16
$-p$	$-p^2$	$4p$
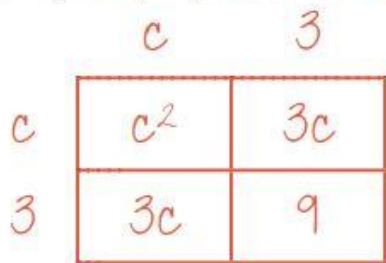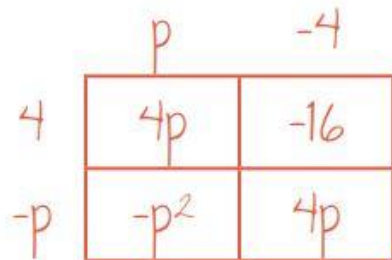
Additional Practice Key

You learned how to use mathematical reasoning to clearly and understandably square variables.

For additional practice, click the link: **Solve Me Mystery Grids**