Math Virtual Learning

HS/Essential Math II

May 20, 2020

High School/Essential Math 2
Lesson: May 19, 2020
(U4L8)

Objective/Learning Target

Multiply variables and combine like terms to consolidate their understanding of the structure of multiplication & sort out several common errors
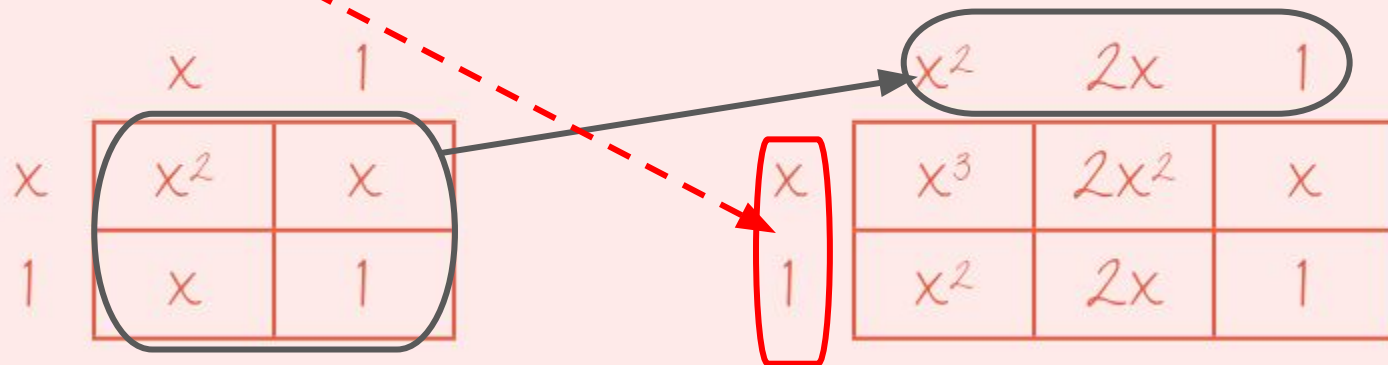
BELLWORK

TOUGH STUFF

(24) Use two steps to multiply.

$(x + 1)(x + 1)(x + 1) =$ _____

ANSWERS BELL WORK

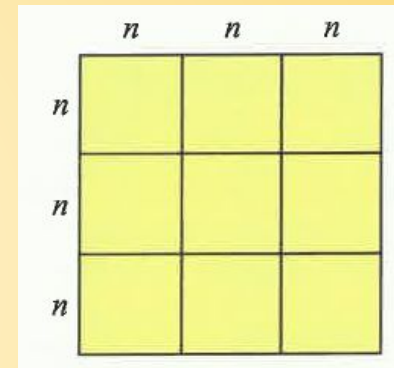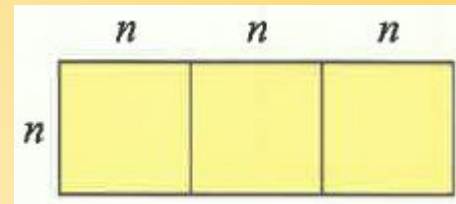(24) Use two steps to multiply.

$(x + 1)(x + 1)(x + 1) =$ _____ $x^3 + 3x^2 + 3x + 1$

	x	1
x	x^2	x
1	x	1

| x^2 | $2x$ | 1 |

	x^2	$2x$	1
x	x^3	$2x^2$	x
1	x^2	$2x$	1

Lesson - Some shapes have multiple expressions

Ⓐ $9n^2$	**Ⓑ** $3n^2$
Ⓒ $2n + 12$	**Ⓓ** $2n + 6$
Ⓔ $2(n + 3)$	**Ⓕ** $2(n + 6)$
Ⓖ $(3n)^2$	**Ⓗ** $(n + 6)^2$
Ⓘ $n^2 + 12n + 36$	**Ⓙ** $n^2 + 6^2$

Diagram: rectangle with width n and 3, height 2 (orange and green segments).

$\boxed{D}$ $2n + 6$

$\boxed{E}$ $2(n + 3)$

Grid: n and 6 across top, n and 6 down side (yellow, purple, purple, orange quadrants).
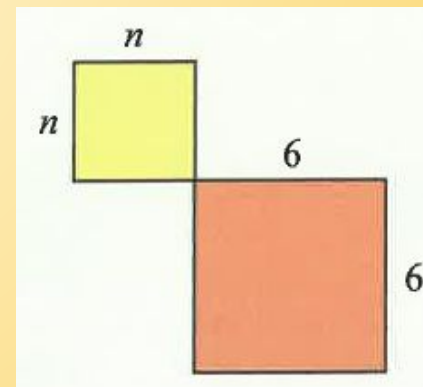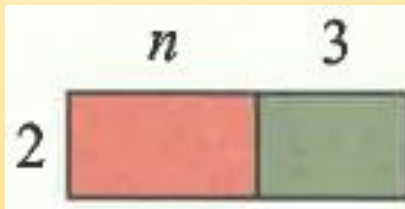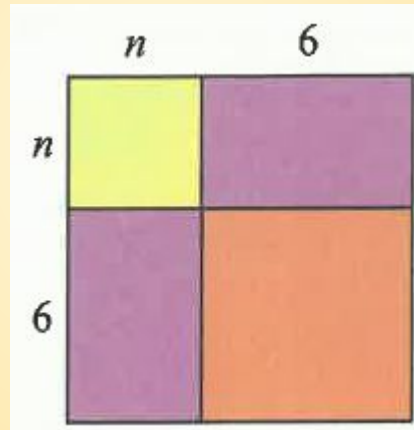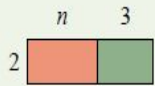
$\boxed{H}$ $(n + 6)^2$

$\boxed{I}$ $n^2 + 12n + 36$

Attach the matching expressions and descriptions here
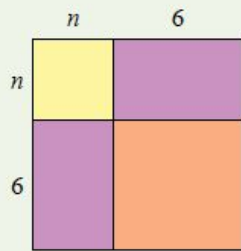
Diagram: rectangle with width n and 6, height 2 (orange and blue segments).

$\boxed{C}$ $2n + 12$

$\boxed{F}$ $2(n + 6)$

Diagram: three squares side by side, labeled n, n, n across top, n down side (yellow).

$\boxed{B}$ $3n^2$

Attach the matchin...

Grid 3×3: n, n, n across top, n, n, n down side (yellow).

$\boxed{A}$ $9n^2$

$\boxed{G}$ $(3n)^2$
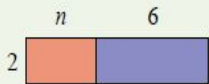
Attach the matching e...
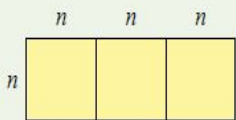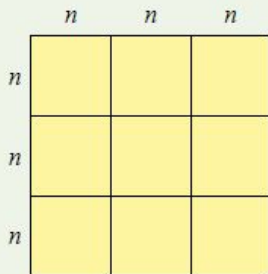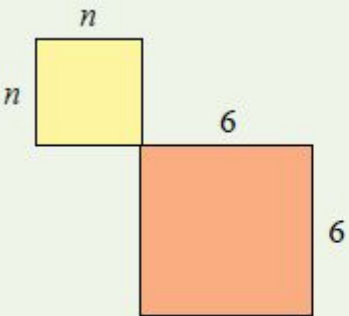
Diagram: square with side n (yellow) and square with side 6 (orange).

$\boxed{J}$ $n^2 + 6^2$

Lesson - Answer Key

Stuff to Make You Think

⑧ $(c - 1)(c + 1) =$ _____

⑨ $(c - 2)(c + 2) =$ _____

ANSWERS Stuff to Make You Think

⑧ $(c-1)(c+1)$ = __$c^2 - 1$__

	c	1
c	c^2	c
-1	$-c$	-1

⑨ $(c-2)(c+2)$ = __$c^2 - 4$__
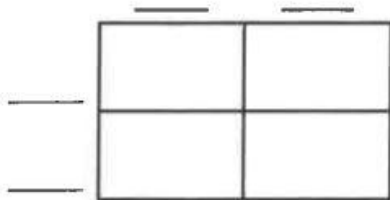
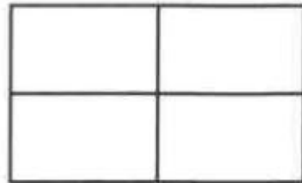|	c	2
c	c^2	$2c$
-2	$-2c$	-4

Additional Practice

Use an area model to multiply these expressions.

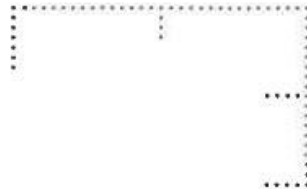Ⓐ $(n + 3)(n + 4) =$ _____

Ⓑ $(n + 4)^2 =$ _____

Ⓒ $(n - 4)^2 =$ _____

Ⓓ $(n + 4)(n - 4) =$ _____

Additional Practice Key

Additional Practice

Use an area model to multiply these expressions.

(A) $(n + 3)(n + 4) =$ $\underline{\quad n^2 + 7n + 12 \quad}$

	n	3
n	n^2	$3n$
4	$4n$	12

(B) $(n + 4)^2 =$ $\underline{\quad n^2 + 8n + 16 \quad}$

	n	4
n	n^2	$4n$
4	$4n$	16

(C) $(n - 4)^2 =$ $\underline{\quad n^2 - 8n + 16 \quad}$

	n	-4
n	n^2	$-4n$
-4	$-4n$	16

(D) $(n + 4)(n - 4) =$ $\underline{\quad n^2 - 16 \quad}$

	n	4
n	n^2	$4n$
-4	$-4n$	-16

Today you learned to multiply variables and combine like terms to consolidate their understanding of the structure of multiplication & sort out several common errors

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