



Math Virtual Learning

HS/Essential Math II

May 19, 2020



High School/Essential Math 2
Lesson: May 19, 2020
(U4L7 part II)

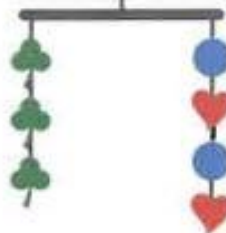
Objective/Learning Target

Use mathematical reasoning to clearly and understandably square variables

Bellwork

21

48



30



♥ = _____ ● = _____ ♣ = _____

22

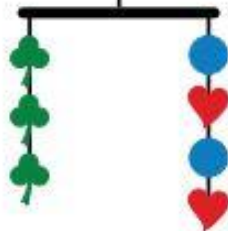
MysteryGrid 1, 2, 3, 4

4,•	5,+	8,•	
		9,•	
3,+			8,•
12,•			

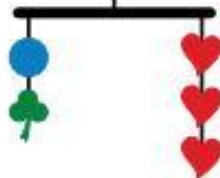
Bellwork Key

21

48



30



 = 5  = 7  = 8

22

MysteryGrid 1, 2, 3, 4

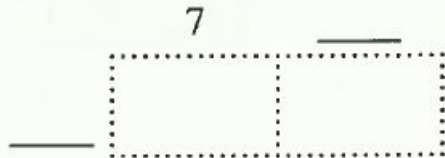
4,• 1	5,+ 3	8,• 4	2
4 4	2	9,• 1	3
3,+ 2	1	3	8,• 4
12,• 3	4	2	1

Draw an area model and use it to multiply.

⑥ $b(b + 7) =$ _____

⑦ $b(7 - b) =$ _____

⑧ $x(2x - 3) =$ _____



⑨ $(b + 7)(7 - b) =$ _____

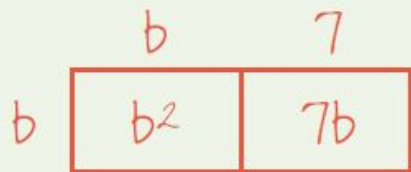
⑩ $(b + 7)^2 = (\text{_____})(\text{_____}) =$ _____

If x^2 is $x \cdot x$, what multiplication problem is meant by $(b + 7)^2$?

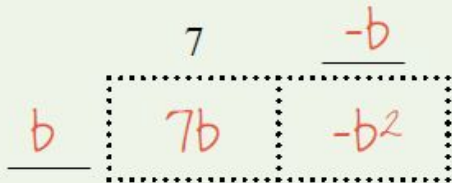
Lesson

Draw an area model and use it to multiply.

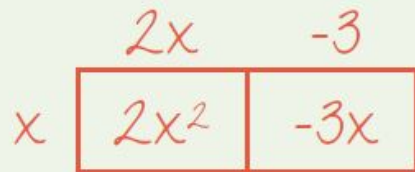
$$\textcircled{6} \quad b(b+7) = \underline{b^2 + 7b}$$



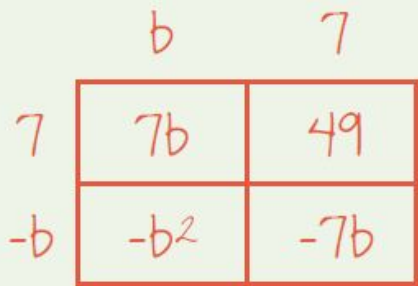
$$\textcircled{7} \quad b(7-b) = \underline{7b - b^2}$$



$$\textcircled{8} \quad x(2x-3) = \underline{2x^2 - 3x}$$

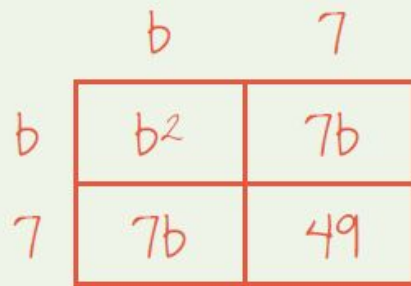


$$\textcircled{9} \quad (b+7)(7-b) = \underline{-b^2 + 49}$$



$$\textcircled{10} \quad (b+7)^2 = (\underline{b+7})(\underline{b+7}) = \underline{b^2 + 14b + 49}$$

If x^2 is $x \cdot x$, what multiplication problem is meant by $(b+7)^2$?



(The order of the terms and the setup of the models may vary.)

Lesson - Answer Key

Stuff to Make You Think

Multiply

$$\textcircled{21} \quad -j(j - 3k + 8) = \underline{\hspace{10em}}$$

$$\textcircled{22} \quad (y - x)(2x + y - 3) = \underline{\hspace{10em}}$$

Answers Stuff to make you think

$$\textcircled{21} \quad -j(j - 3k + 8) = \underline{-j^2 + 3jk - 8j}$$

	j	-3k	8
-j	$-j^2$	$3jk$	$-8j$

$$\textcircled{22} \quad (y - x)(2x + y - 3) = \underline{xy - 2x^2 + y^2 - 3y + 3x}$$

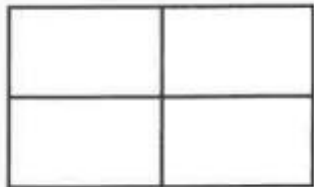
	y	-x
2x	$2xy$	$-2x^2$
y	y^2	$-xy$
-3	$-3y$	$3x$

After combining like terms, there are 5 terms in the answer.

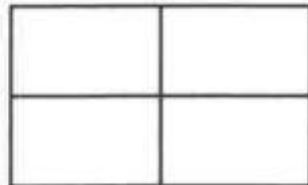
Additional Practice

Use the area models to multiply.

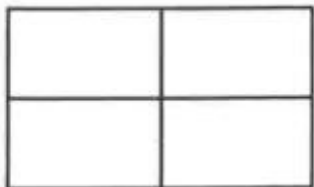
Ⓜ $(x + 5)(x + 2) =$ _____



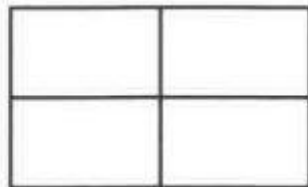
Ⓜ $(x + 5)(x - 2) =$ _____



Ⓜ $(x - 5)(x - 2) =$ _____



Ⓜ $(x - 5)(x + 2) =$ _____



Additional Practice Key

$$\textcircled{\text{H}} \quad (x+5)(x+2) = \frac{x^2 + 7x + 10}{x \quad 5}$$

x	x^2	$5x$
2	$2x$	10

$$\textcircled{\text{I}} \quad (x+5)(x-2) = \frac{x^2 + 3x - 10}{x \quad 5}$$

x	x^2	$5x$
-2	$-2x$	-10

$$\textcircled{\text{J}} \quad (x-5)(x-2) = \frac{x^2 - 7x + 10}{x \quad -5}$$

x	x^2	$-5x$
-2	$-2x$	10

$$\textcircled{\text{K}} \quad (x-5)(x+2) = \frac{x^2 - 3x - 10}{x \quad -5}$$

x	x^2	$-5x$
2	$2x$	-10

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

For additional practice, click the link: [Solve Me Mystery Grids](#)