

Early Introduction to Expressions and Equations:

NYS COMMON CORE MATHEMATICS CURRICULUM LESSON 11 HOMEWORK K•1

Name Mei Date 4/8

Count the cubes. Draw a line to break the stick between the grey cubes and the white cubes. Draw the cubes above the numbers.

COMMON CORE LESSON 11: Model Decompositions with Materials, Drawings, and Expressions, e.g., after separating 3 into 2 parts, represent that decomposition as $1 + 2$ and $2 + 1$. engage^{ny} 1.C.6

Grade K Module 1 Lesson 11: *Model Decompositions of 3 with materials, drawings and expressions.*

Grade 1 Module 2: *Strategize and apply understanding of the equal sign to solve equivalent expressions.*

Name _____ Date _____

1. Circle "true" or "false."

Equation	True or False?
a. $2 + 3 = 5 + 1$	True / False
b. $7 + 9 = 6 + 10$	True / False
c. $11 - 8 = 12 - 9$	True / False
d. $15 - 4 = 14 - 5$	True / False
e. $18 - 6 = 2 + 10$	True / False
f. $15 - 8 = 2 + 5$	True / False

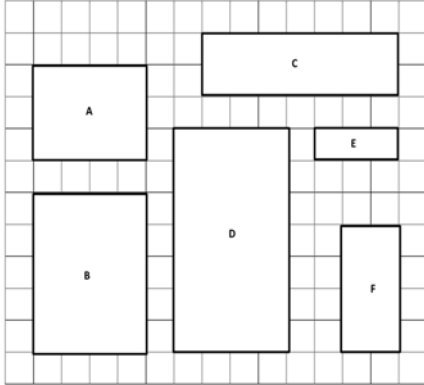
2. Lola and Charlie are using expression cards to make true number sentences. Use pictures and words to show who is right.

a. Lola picked $4 + 8$ and Charlie picked $9 + 3$. Lola says these expressions are equal but Charlie disagrees. Who is right? Explain your thinking.

An Extended Intervention, Teaching Sequence for Algebra M3 Mid Module Assessment #2

Name _____ Date _____

1. Use a straight edge to draw a grid of equal size squares within the rectangle. Find and label the side lengths. Then multiply the side lengths to find the area.



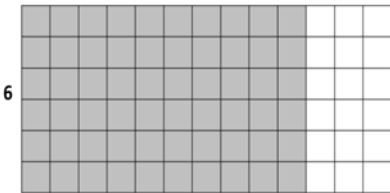
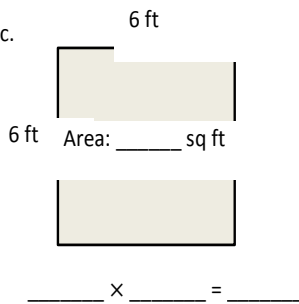
A. Area: $___ \times ___ = ___$ square units

D. Area: $___ \times ___ = ___$ square units

B. Area: $___ \times ___ = ___$ square units

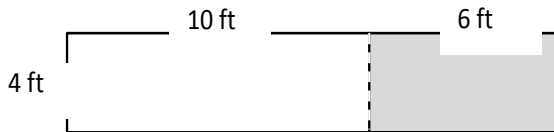
E. Area: $___ \times ___ = ___$ square units

c.



$$\begin{aligned}
 6 \times 13 &= 6 \times (___ + 3) \\
 &= (6 \times ___) + (6 \times 3) \\
 &= ___ + ___ \\
 &= ___ \text{ square units}
 \end{aligned}$$

3. An artist paints a 4×16 foot mural on a wall. What is the total area of the mural? Use the break apart and distribute strategy.



1. Grade 3 Module 4 Topic B Lesson 7:

Interpret area models to form rectangular arrays.



2. Grade 3 Module 4 Topic B Lesson 8:

Find the area of a rectangle by multiplying the side lengths.



3. Grade 3 Module 4 Topic C Lesson 10:

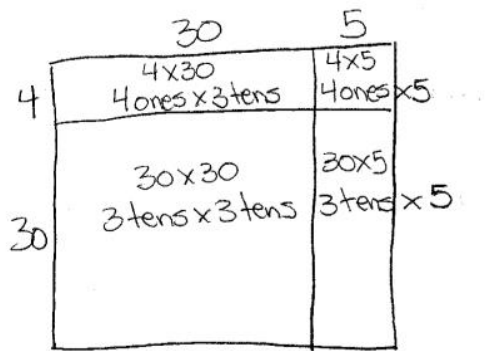
Apply the distributive property as a strategy to find the total area of a large rectangle by adding two products.



4. Grade 3 Module 4 Topic D Lesson 12:

Solve word problems involving area.





$$\begin{aligned}
 34 \times 35 &= (4 \times 5) + (4 \times 30) + (30 \times 5) + (30 \times 30) \\
 &= 20 + 120 + 150 + 900 \\
 &= 1,190
 \end{aligned}$$

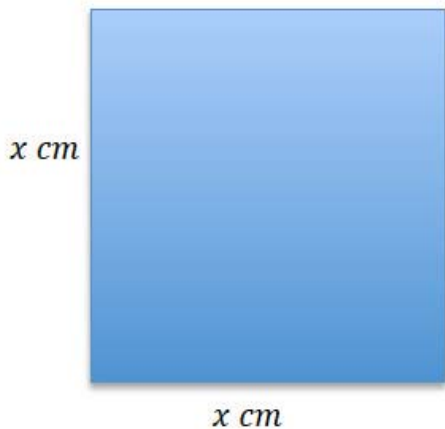
5. Grade 4 Module 3 Topic H Lesson 36:

Multiply 2-digit by 2-digit numbers using four partial products.

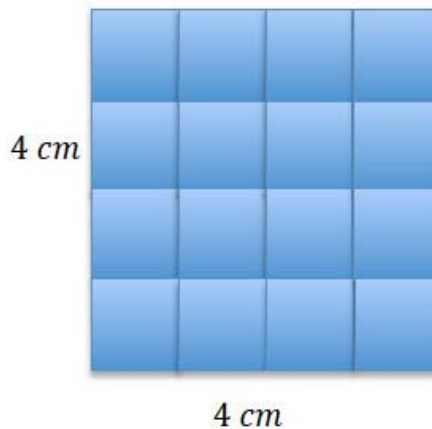


6. Grade 6 Module 4 Topic C Lessons 7 and 8:

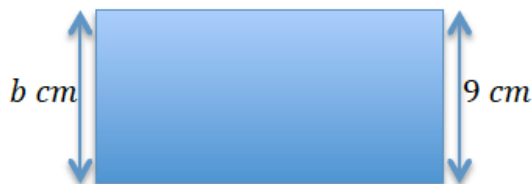
Replacing numbers with letters.



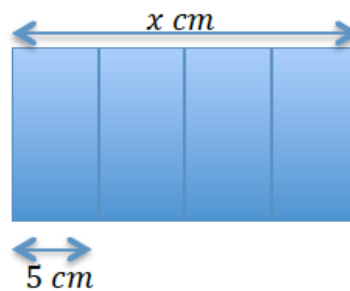
$$\begin{aligned}
 A &= l \cdot w \\
 A &= x \text{ cm} \cdot x \text{ cm} \\
 A &= x^2 \text{ cm}^2
 \end{aligned}$$



$$\begin{aligned}
 A &= l \cdot w \\
 A &= 4 \text{ cm} \cdot 4 \text{ cm} \\
 A &= 4^2 \text{ cm}^2 \\
 A &= 16 \text{ cm}^2
 \end{aligned}$$



$$\begin{aligned}
 \text{Width} &= 9 \text{ cm} \\
 \text{Width} &= b \text{ cm} \\
 b &= 9 \text{ cm}
 \end{aligned}$$

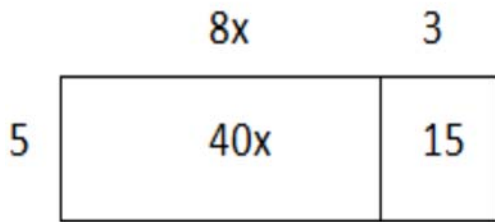
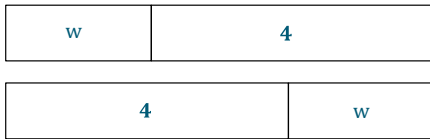


$$\begin{aligned}
 \text{Length} &= x \text{ cm} \\
 \text{Length} &= 4 \cdot 5 \text{ cm} \\
 \text{Length} &= 20 \text{ cm} \\
 x &= 20 \text{ cm}
 \end{aligned}$$

$$\begin{aligned}
 A &= l \cdot w \\
 A &= x \cdot b \\
 A &= 20 \text{ cm} \cdot 9 \text{ cm} \\
 A &= 180 \text{ cm}^2
 \end{aligned}$$

Write two expressions to show w increased by 4. Then draw models to prove that both expressions represent the same thing.

$w + 4$ and $4 + w$



∴

$$5(8x + 3)$$

$$5(8x) + 5(3)$$

$$40x + 15$$

7. Grade 6 Module 4 Topic C Lesson 9:

Writing addition and subtraction expressions.



8. Grade 7 Module 3 Topic A Lesson 3:

Writing products as sums and sums as products.



Use a table to aid in finding the product of $(2x + 1)(x + 4)$.

$2x$	$+ 1$
x	x
$+$	$+$
4	4
$2x^2$	x
$8x$	4

$$(2x + 1)(x + 4) = 2x^2 + x + 8x + 4 = 2x^2 + 9x + 4$$

9. Algebra Module 4 Topic A Lesson 2

Multiplying and factoring polynomial expressions.