M2L3 - Writing Numerical Expressions.

Application Problem

R. | 11 |

G | 11 | 11 | 11 | +2 |

$(3 \times 11) + 2 = X$

$33 + 2 = X$

$35 = X$

Gwen is 35 years old.

M2L3 - Writing Numerical Expressions

Expression ~ a number sentence using operations

Numerical
- $9 - 3$
- $12 \times (3 + 4) \div 6 - 2$

Algebraic
- $m \cdot 4 - 3 \div 1$
- $7 + h$

Equation : a number sentence using operations that are equal (=)

Numerical
- $7 - 2 = 5$
- $5 + 4 = 18 - 9$

Algebraic
- $y - 3 = 5$
- $3b \cdot 14 = 72$

Vocab

Sum: answer to addition
difference between: answer to subtraction
product: answer to multiplication
quotient: answer to division

3 times the sum of 26 and 4
　multiplication　　addition

1	2	3
26+4	26+4	26+4

$3 \times (26 + 4)$

Order of Operations:

P E M D A S
Parenthesis
Exponents
Multiply / Divide
Add / Subtract

$$3 \times (4 + 12) - 7 \times 8$$
$$3 \times \quad 16 \quad - 7 \times 8$$
$$48 - 56$$
$$-8$$

6 times the difference between 60 and 51

multiply   subtract

| (60-51) | 60-51 | 60-51 | 60-51 | 60-51 | 60-51 |

$$6 \times (60-51)$$

The sum of (2 twelves) and (4 threes)

$$(2 \times 12) + (4 \times 3)$$

$8 \times (43-13)$ $8 \times 43-13$

   $8 \times$ 30 $344 - 13$

     240 331

8 times the difference between 43 and 13

$$(16 + 9) \times 4$$

The sum of 16 and 9 times 4

$$(20 \times 3) + (5 \times 3)$$

The sum of 20 threes and 5 threes

$9 \times 13 \sim 9$ thirteens

8 thirteens $\sim 8 \times 13$

The sum of 10 and 9, doubled

$$(10 + 9) \times 2$$

30 fifteens minus 1 fifteen

$$(30 \times 15) - 15$$

$(2 \times 10) + (2 \times 9)$

The sum of 2 tens and 2 nines

$29 \times 15 \sim 29$ fifteens

Name _____   Date _____

1. Draw a model. Then, write the numerical expressions.

a. The sum of 8 and 7, doubled	b. 4 times the sum of 14 and 26
$(8+7) \times 2$	$4 \times (14+26)$

c. 3 times the difference between 37.5 and 24.5	d. The sum of 3 sixteens and 2 nines
$3 \times (37.5 - 24.5)$	$(3 \times 16) + (2 \times 9)$

e. The difference between 4 twenty-fives and 3 twenty-fives	f. Triple the sum of 33 and 27
$(4 \times 25) - (3 \times 25)$	$3 \times (33+27)$ $3(33+27)$

2. Write the numerical expressions in words. Then, solve.

Expression	Words	The Value of the Expression
a. $12 \times (5 + 25)$	12 times the sum of 5 and 25	360
b. $(62 - 12) \times 11$		
c. $(45 + 55) \times 23$		
d. $(30 \times 2) + (8 \times 2)$		

3. Compare the two expressions using > , < , or = . In the space beneath each pair of expressions, explain how you can compare without calculating. Draw a model if it helps you.

a. $24 \times (20 + 5)$ 24×25	⊙>	$(20 + 5) \times 12$ 25×12
b. 18×27	⊙<	20 twenty-sevens minus 1 twenty-seven (20̶ × 27) ⊖ (1̶ × 27) 19×27
c. 19×9	◯	3 nineteens, tripled

EUREKA
MATH™

Lesson 3: Write and interpret numerical expressions, and compare expressions using a visual model.

50

©2015 Great Minds. eureka-math.org
G5-M2-TE-1.3.0-06.2015