Name "Teacher" Pd 12 Date December 12, 17 **Section 1.R.2**

Translating Math ←→ Verbal

Using Multiple Operations at Once

Each algebraic expression has multiple verbal translations. List the verbal expressions that correctly translate the algebraic expression.

E, H 1. $2x + 4$

A, K 2. $2(x + 4)$

F, I 3. $2(x - 4)$

B, C, J 4. $2x - 4$

G, D 5. $\frac{2x}{4}$

a. two times the sum of a number and four

b. two times a number minus four

c. four less than the product of two and a number

d. the quotient of two times a number and four

e. the sum of two times a number and four

f. two times the difference of a number and four

g. divide the product of two and a number by four

h. four more than the product of two and a number

i. two times the quantity of a number minus four

j. the difference of two times a number and four

k. two times the quantity of a number plus four

Multiple Choice - Translate.

5) seven times the sum of r and s

a. $7r + s$

b. $7 + rs$

c. $7(r + s)$

d. $7rs$

6) $3x - 5$

a. three times the difference of a number and five

b. three times a number less than five

c. a number times the difference of three and five

d. the difference of three times a number and five

Solve Some Equations with Fractions - Multiply by the denominator. Cross multiply.

7) $\frac{x-5}{2} = -3 \cdot 2$

$x - 5 = -15$

$+5 \quad +5$

$x = -10$

8) $\frac{-8+k}{4} = 2 \cdot 4$

$-8 + k = 8$

$+8 \quad +8$

$k = 16$

9) $\frac{7}{c} = \frac{21}{36}$

$\frac{21c}{21} = \frac{252}{21}$

$c = 12$

10) $\frac{3}{5} = \frac{24}{h}$

$\frac{3h}{3} = \frac{120}{3}$

$h = 40$

Distributive Property - With Fractions

Write the steps of each method.

$$\frac{1}{4}(8x-2)$$

Method 1:

$\frac{1}{4}(8x)+\frac{1}{4}(-2)$	distribute
$\frac{1}{4}\left(\frac{8x}{1}\right)+\frac{1}{4}\left(\frac{-2}{1}\right)$	Put a 1 under
$\frac{8x}{4}+\frac{-2}{4}$	mult. straight across
$2x+\left(-\frac{1}{2}\right)$	Divide/reduce
$2x-\frac{1}{2}$	simplify

Method 2:

$\frac{8x-2}{4}$	make 1 fraction
$\frac{8x}{4}+\frac{-2}{4}$	distributive.
$2x+\left(-\frac{1}{2}\right)$	Divide/reduce
$2x-\frac{1}{2}$	simplify

Choose the method you prefer and SHOW YOUR WORK.

1) $\frac{1}{4}(12x-9)$

$\frac{12x-9}{4}$

$\frac{12x}{4}+\frac{-9}{4}$

$3x-9/4$

2) $-\frac{1}{8}(64x-2)$

$\frac{64x-2}{-8}$

$\frac{64x}{-8}+\frac{-2}{-8}$

$-8x+1/4$

Multiple Choice - Simplify.

3) $\frac{1}{6}(6x-4)$

$\frac{6x-4}{6}$

$\frac{6x}{6}+\frac{-4\cdot 2}{6\cdot 2}=\frac{-2}{3}$

$x-2/3$

a. $36x-24$

b. $36x-4$

c. $x-24$

(d.) $x-\frac{2}{3}$

4) $(14x-49)\left(-\frac{1}{7}\right)$

$\frac{14x-49}{-7}$

$\frac{14x}{-7}+\frac{-49}{-7}$

$-2x+7$

(a.) $-2x+7$

b. $2x-7$

c. $-2x-7$

d. $2x+7$