Distributive Property of Multiplication (DPOM):

Example 1: $3(4 + 5) = 3 \cdot 4 + 3 \cdot 5$

$$= \quad 12 + 15$$

$$= \quad 27$$

(You "distribute" or "run" the 3 through the "( )")

Example 2: $(2 + 6)4 = 4 \cdot 2 + 4 \cdot 6$

$$= \quad 8 + 24$$

$$= \quad 32$$

(You "distribute" or "run" the 4 through the "( )")

Example 3: $3(x - 4) = 3 \cdot x - 3 \cdot 4$

$$= \quad 3x - 12$$

(You "distribute" or "run" the 3 through the "( )")

Example 4: $-5(2x - 4) = -5 \cdot 2x - -5 \cdot 4$

$$= \quad -10x - -20$$

$$= \quad -10x + 20$$

(You "distribute" or "run" the -5 through the "( )")

Do 1–4 on your own: Use my arrows to help. (Be careful #3 and #4 are tricky.)

1. $4(7x - 6) =$

2. $-(3x + 9) =$

3. $\frac{3}{4}(8x + 12) =$

4. $-3(2x - 6y + 10) =$

Try 5 – 10 on your own. This time I did not provide the arrows but you may draw them in to help.

5. $6(-5c + 9) =$

6. $\frac{2}{7}(14x - 28) =$

7. $(3x + 9)8 =$

8. $-9(5m - 6n) =$

9. $7(-7r + 8) =$

10. $-11(3a - 4b + 5c) =$

Home work on Distributive Property of Multiplication
Please show _ALL_ of your work for full credit.

1. $(w + 3)7 =$ **#1 answer:** _____

2. $8(k - 9) =$ **#2 answer:** _____

3. $5(b - 6) =$ **#3 answer:** _____

4. $3(6 + k) =$ **#4 answer:** _____

5. $24(b - 42) =$ **#5 answer:** _____

6. $\frac{3}{8}(16x - 24) =$ **#6 answer:** _____

7. $-(3x - 4y + 5z) =$ **#7 answer:** _____

8. $-6(2x + 3y + 5) =$ **#8 answer:** _____

9. $2.8(10x + y) =$ **#9 answer:** _____

10. $(2x + 3y + 5)(-2) =$ **#10 answer:** _____