Name: Key
8A; Algebra 1

Date:_____
Period_____

Homework

I. Find the product:

1) $(6xy)(-2z)$

$-12xyz$

2) $(5a^2)(-5a)$

$-25a^3$

3) $(2r^2s^3)(-4r^3s)$

$-8r^5s^4$

Don't Distribute

4) $(-\frac{1}{4}d^2)(24ad)$

$-6d^3a$

5) $(-2x)^2$

$(-2)^2(x)^2$ or $(-2x)(-2x)$

$4x^2$ $4x^2$

6) $(3a^2b)^2$

$(3)^2(a^2)^2(b)^2$ or $(3a^2b)(3a^2b)$

$9a^4b^2$ $9a^4b^2$

7) $-8\left(\frac{3}{4}x-\frac{1}{2}\right)$

$-6x+4$

8) $2ab(6a^3 - 3b^2)$

$12a^4b - 6ab^3$

9) $5x(2x^2 - 3x + 7)$

$10x^3-15x^2+35x$

Distribute

II. Distribute and Combine Like Terms:

10) $4 - 3(2x + 5)$

$4-6x-15$

$-6x-11$

11) $(x^2 - 3x + 7) - (x^2 - 6x - 2)$

$x^2-3x+7-x^2+6x+2$

$3x+9$

12) $(3x^2 + 8x - 5) - (-2x^2 + 4x - 10)$

$3x^2+8x-5+2x^2-4x+10$

$5x^2+4x+5$

13) $2x(3x - 4) + 5(3x - 4)$

$6x^2-8x+15x-20$

$6x^2+7x-20$

14) $2x^2(x + 4) - 3x(5x + 1)$

$2x^3+8x^2-15x^2-3x$

$2x^3-7x^2-3x$

15) The width of a rectangle is represented by w. The length is three more than twice the width.

(a) Express the <u>perimeter</u> of the rectangle as a binomial in terms of w.

Let $2w+3$ = the length

$P = 2L + 2w$

$P = 2(2w+3) + 2(w)$

$P = 4w + 6 + 2w$

$P = 6w + 6$

(b) Express the <u>area</u> of the rectangle as a binomial in terms of w.

$A = L \cdot W$

$A = (2w+3)w$

$A = 2w^2 + 3w$

III. Simplify each of the following if possible. If not possible, explain why.

16) $x^3 + x^4$

Can't Simplify, not like terms. B/C the exponents are not the same

17) $x^3 \cdot x^4$

x^7

18) $x^4 - x^3$

Can't Simplify not like terms B/C the exponents are not the same