

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 $(-2x)(-2x)$
 $4x^2$

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

$(3)^2(a^2)^2(b)^2$ or $(3a^2b)(3a^2b)$
 $9a^4b^2$

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

$-6x + 4$

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

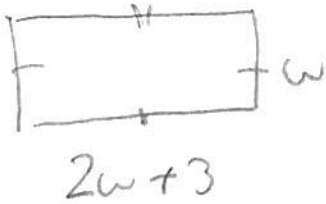
$6x^2 - 8x + 15x - 20$
 $6x^2 + 7x - 20$

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 perimeter of the rectangle as a binomial in terms of w .



Let
 $2w+3 = \text{the length}$

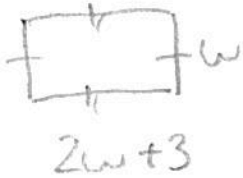
$$P = 2L + 2w$$

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

$$P = 4w + 6 + 2w$$

$$P = 6w + 6$$

(b) Express the area 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