Algebra 1 Name_____ ID: 1

Chp 13, 4-1 to 4-4 & 5-2 with DiRT TEST

Date_____ Period____

Answer each question with the best description or definition:

1) Choose the monomial

A) $\frac{x^2}{y}$ B) $-\frac{1}{3}x^2y^2$

C) $\frac{1}{\sqrt{-x}}$ D) x^{-7}

2) A binomial

A) the sum, or difference, of two monomials.
B) two monomials multiplying eachother
C) a polyethalenomial difference
D) a polynomial with two binomials

3) how many terms are there in the following polynoimial:

$2 - x^2y + 123x^4y^4 + 3a - ab^2$

A) 4 B) 15 C) 5 D) 6

4) different monomials containing the same variables with the same exponent values are considered

A) like terms B) monomial terms C) polynomials D) binomials

5) the number, integer, or fraction multiplying a variable:

A) quadratic multiplier B) polyficient
C) coefficient D) monomial factor

6) what is the degree of the monomial $-2x^2y^3z$

A) 6 B) 3
C) none of the choices D) 5

7) what is the degree of the polynomial $-2x^2y^2 - 3xy + 4x^2y^2z$

A) 3 B) none of the choices
C) 4 D) 5

8) If I subtract $6x^2 - 2xy^2 + 3$ from $x^2 + 6xy^2 - 1$, chose the polynomial below which has been correctly converted to its opposite in order to subtract them.

A) $-6x^2 + 2xy^2 - 3$ B) $-x^2 + 6xy^2 - 1$
C) $-6x^2 - 2xy^2 + 3$ D) $-x^2 - 6xy^2 + 1$

Simplify

9) -3^4

10) $(-5)^3$

11) $(-2)^4$

12) $(-x)^6$

Evaluate each expression when $a = -1$ & $b = 3$.

13) $a^3 - b^2$

14) $b(a^2 - b)^b$

Simplify each expression

15) $x \times z \times 3x \times -x \times -x \times -3y$

16) $5a \times b \times b \times -b \times -ab \times 5a$

17) Choose the answer that matches the following: "The product of a cubed and c squared."

A) $a^3 + c^2$ B) a^{3c}

C) a^3c^2 D) $3a^3 \cdot 2c$

Simplify each expression.

18) $(8 - 2r^3) + (5r - 6r^3)$

19) $(6m^4 - m^2) - (5m^2 + 5m^4)$

20) $(8a^3 - 4ab + 7a^3b) + (3a^3b - 4a^3 - ab)$

21) Subtract $2x^2y^2 - 4xy + 9x$ from $-4xy + 2x - 4x^2y^2$ (3pts) show work

Find each product.

22) $-4x^2 \cdot 5xy$

23) $-2x \cdot 6xy^3 \cdot 5x^3yz$

24) $\frac{4}{5}a^2b^4 \cdot 20ab^2$

25) $\frac{25n^3m^2}{6} \cdot \frac{36nm^2}{5}$

26) Find the perimeter and the area of the following shape:

P =

A =

Simplify.

27) $(5a^2b)^3 \cdot \frac{1}{25a^2b}$

28) $(2a^3b^4)^4$

29) $\frac{2x^3y^4}{8x^5y^2}$

30) $(nm^4)^2 \cdot (n^2m^2)^2$

31) $\frac{2xy^3}{(x^{10}y^2)^0} \cdot \frac{1}{x^2y^2}$

32) Find the missing value:

A. (?) $2x^3y^2 = -16x^4y^4$

B. $(3x^2y^3z)^4 = (3x^2y^3)^2$ (?)

33) Debbie drove to the store at 25 mph. After getting to the store she realized she forgot her purse. She drove back home at 40 mph to get it. The entire round trip took 13 minutes. How long did it take her to drive back at 40 mph? (3pt)

34) The average honey bee can fly approximately 22 feet per second when it really wants to sting someone. How many miles per hour is this? Can you out run it? (3pt)

35) Put the following one variable polynomial in standard from: (1pt)
$5x - 9 + x^5 - 3x^2$

Algebra 1 Name_____ ID: 1

Study Guide Chp pt 2: 4-5 to 4-9

Date_____ Period____

1) Circle the binomial with a degree of 1:

A) $x^2 - 1$ B) $x - y - 1$
C) $-yx - 1$ D) $-x - 1$

2) Circle the trinomial.

A) $-1 - x - x^2 - x^3$
B) $x^2 - x - 1$
C) $x^3 - 1$
D) $x^3 - x^2 - x - 1$

3) Two boats leave Dana Point harbor at 8am. At noon the boats were 140 miles apart. One boat was traveling 15 miles per hour faster than the other. Find each boats speed.

4) Ted Blankenshire walked up a hill at 4 mph with his skateboard. Once atop the hill he rode his skateboard back down at 20 mph to his original starting point. The entire round trip took 30 minutes. How long in minutes did the trip up the hill take?

Find each product.

5) $-5y^2(2y - 3)$

6) $-5a^2b(7a - b + 2ab)$

Simplify

7) $\frac{2}{3}k(6k + 12) + k^2 - \frac{1}{4}(8k^2 + 24)$

8) $2x(x + 8) - x^2 - 16x - 2b(2b - 1) - b + 4b^2$

Solve:

9) $x(5x - 2(3 + 2x)) = x^2 + 1$

Find each product.

10) $(n+1)^2$

A) n^2+1 B) n^2+n+1
C) n^2-1 D) n^2+2n+1

11) $(7p-7)(7p+7)$

A) $49p^2-49$
B) $49p^2+98p+49$
C) $4-36p^2$
D) $49p^2-98p+49$

12) $(4m-6)^2$

A) $16m^2-48m+36$
B) $16m^2+36$
C) $36m^2-49$
D) $16m^2-36$

13) $(7u-3v)(2u+2v)$

A) $14u^2+8uv-6v^2$
B) $14u^2-6v^2$
C) $14u^2-20uv+6v^2$
D) $6u^2-41uv+30v^2$

14) $(5x+6y)(x-7y)$

A) $5x^2+41xy+42y^2$
B) $5x^2-42y^2$
C) $8x^2-20xy+8y^2$
D) $5x^2-29xy-42y^2$

15) $(b+2c)(b^2-2bc+4c^2)$

Solve for the variable *a*:

16) $dc+ag=f$

17) $\dfrac{ab+ac}{t}=1$

Solve the word problems:

18) A rectangle's length is 4 more than it is wide. If the sides are both increased by 3 inches its area is increased by 51 square inches. Find the dimensions of the original rectangle. Use a drawing.