ALGEBRA 2

REVIEW SHEET 3-2 NAME _____

Determine if the following are polynomials (circle either yes or no). ***If yes***, then state the degree.

1) $3m^3 - m + 7 - 4m^7$ yes no Degree = _____

2) $12ab^5 + a^5b^3 - 11a^5bc$ yes no Degree = _____

3) $4y^{-3} + 4y^3$ yes no Degree = _____

4) $n^2 + n\sqrt{7} - 1 + n^3$ yes no Degree = _____

5) $\frac{2}{3}xy^5 + 9x^3y^4 + \frac{5}{4}x^6$ yes no Degree = _____

6) $10 - 2\sqrt[3]{d+5}$ yes no Degree = _____

Add or subtract the polynomials.

7) $(2b + 2c - d) + (8c - 3b - 7d)$

8) $(5xy - 9) - (9y^2 - 5xy + 3y + 11)$

9) $(20a^2 - 5) - (16a^2 - 6)$

10) $(-4x + 7y - 2) + (9x - 3)$

Multiply the polynomials using either the distributive property, FOIL or a "box".

11) $(x - 7)(x - 12)$

12) $(2 - 7y)^2$

13) $4a^3(a^3 - 5a + b)$

14) $(5n - 11)(5n + 11)$

15) $(2b - 3)(b^2 + 4b - 2)$

16) $y^{-5}(2y^7 + y^6 + 5y^5)$

17) $(n^2 + 3)(n^2 + 9)$

18) $(3r + 2q)^2$

19) $(a^2 – a + 5)(3a^2 + 4a – 2)$

20) $3b^{-2}(5b + 4b^2 + 7b^4)$

On your next quiz there will be (5) "review" problems from Section 3-1. They will consist of either multiply, raise to a power, divide, divide with negative exponents or a combination. They will look surprisingly similar to these.

21) $(-4w^5)(3w^8)$

22) $(-2x^9)^4$

23) $\dfrac{24b^3}{18b^7}$

24) $\dfrac{(-3y)^{-1}}{y^{-2}}$

25) $3(5k^3)^2$

Knock, knock…

Key

1) yes, 7
2) yes, 8
3) no
4) yes, 3
5) yes, 7
6) no
7) -b + 10c – 8d
8) $10xy – 9y^2 – 3y – 20$
9) $4a^2 + 1$
10) $5x + 7y – 5$
11) $x^2 – 19x + 84$
12) $49y^2 – 28y + 4$
13) $4a^6 – 20a^4 + 4a^3b$
14) $25n^2 – 121$
15) $2b^3 + 5b^2 – 16b + 6$
16) $2y^2 + y + 5$
17) $n^4 + 12n^2 + 27$
18) $9r^2 + 12rq + 4q^2$
19) $3a^4 + a^3 + 9a^2 +$ $22a – 10$
20) $15/b + 12 + 21b^2$
21) $-12w^{13}$
22) $16x^{36}$
23) $4/3b^4$
24) $-y/3$
25) $75k^6$