Unit 2 Review

Monomials times Polynomials

1. $-1(5a+ b^{2}$)
2. $-c (a+b)$
3. $2x(3x-1)$
4. $x( a+b)$
5. $ab(a^{2}+2ab-1)$
6. $-2(y^{3}-2y^{2}+4y)$

Multiplying Polynomials.

Multiply using the box method.

1. $\left(x+3\right)(x+2)$ 2) $\left(a+3\right)( a+5)$ 3) $\left(3x+4\right)(2x+5)$

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Multiply using the distributive method.

4) $\left(y+3\right)(y-4)$ 5) $\left(4x+1\right)(4x+1)$

6) $\left(m+2\right)(m^{2}-2m+3)$

Make into a trinomial square.

1) $(y-3)^{2}$ 2) $(x+3)^{2}$ 3) $(n+6)^{2}$

4) $(y-8)^{2}$ 5) $(n-5)^{2}$ 6) $(y-1)^{2}$

Divide with monomials.

1) $\frac{c^{9}}{c^{4}}$ 2) $\frac{2x^{2}}{x}$

3) $\frac{12rs}{-3}$ 4) $\frac{4ab}{-2b}$

5) $\frac{-81b^{2}}{9b}$ 5) $\frac{36n^{6}}{6n^{4}}$

7) $\frac{50m^{3}n^{2}}{2m^{2}n}$ 8) $\frac{30pq^{2}}{-3pq}$

Divide the polynomial by a monomial.

1) $\frac{8x-4y}{2}$ 2) $\frac{49m+28n}{7}$

3) $\frac{6x^{2}-48x}{6x}$ 4) $\frac{ab^{2}- a^{2}b}{a}$

5) $\frac{x^{3}+3x^{2}-2x}{x}$ 6) $\frac{n^{2}-3n^{3}+5n^{5}}{n^{2}}$

Exponential Growth and Decay

 Growth Decay

$ a(1+r)^{t}$ $ a(1-r)^{t}$

1. Over the last several years there has been an increase in the amount of school age children carrying cell phones. Assume there are 1,237 students in the US with cell phones. The trend is likely to continue, with the amount of children with phones rising 30% every year. At that rate, how many students will have cell phones in . . .

 a) 2 years

 b) 4 years

 c) 10 years

2) Strapped for cash, you decide to borrow money from a local crime lord. This turns out to be yet another instance of poor judgment on your part. At 22% interest per year, how much will you owe on a loan of $5000 after 2 years?

3. A disease is killing the rodents of Gloomy Falls, Mass.. The current rodent population is 937. Every year the population diminished by 50% How many rodents are left after 3 years?