**HW #406**

**Practice Review for Test 401**

*There are 33 points possible. To get full credit for this assignment, you must hand in your graded assignment before the test on test day. You must show that you graded the assignment from the website by indicating the original number correct over 33 To receive full credit you must show that you corrected the problems that were originally missed. Students who do not show sufficient work to prove that answers were not merely copied from the web site will receive a ZERO for this assignment.*

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| Simplify #1 – 9. Use only positive exponents in your answers. |
| 1)  | 2)  | 3)  |
| 4)  | 5)  | 6)  |
| 7)  | 8)  | 9)  |

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| Rewrite any expression needed into rational exponent form and evaluate with your calculator and give your answer as non-decimal. |
| 10)  | 11)  | 12)  |

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| 13) Write an expression that represents the volume of a rectangular prism with a length of inches, a width of *d* inches and a height of inches. |
| 14) Rewrite the expression as a power of a product  ( ) |

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| For #15 – 26, perform the indicated operations.Answers to problems with only one variable should be written in standard form. |
| 15)  | 16)  | 17)  |
| 18)  | 19)  | 20)  |
| 21)  | 22)  | 23)  |
| 24)  | 25)  | 26)  |

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| For #27 – 28, perform the indicated operations (multi-step Polynomials).These go MUCH faster if you use special products. |
| 27)  | 28)  |

#29 - #30, Divide the polynomials

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| 29)  30)  |

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| Set up and solve #31 as we did in class. Remember to draw picture that models the situation and follow the steps outlined in class. |
| 31) A diploma is 4 inches taller than it is wide. It is surrounded on all 4 sides by a frame that is 1.5 inches wide. If the area of the frame is 123 in2, find the dimensions of the diploma. |
| 32) A rectangular photograph is 3 times longer than it is wide in centimeters. A frame 2 centimeters wide is placed around the picture.a) Write a polynomial expression in simplest form that represents the **perimeter** of the frame.b) Write a polynomial expression in simplest form that represents the **area** of the frame.c) Find the **perimeter** of the frame if the picture is 10 centimeters wide. |