**Week 2 Assignment 3 test**

**1.** **Perform the indicated operations. Write the result in standard form.**  
  
(5 - 4i) + (8 + 7i)   
       -3 + 11i   
       -13 - 3i   
       13 + 3i   
       13 - 3i   
  
  
**2.** **Add or subtract, as indicated.**  
  
(5w4 - 7wz - 4wz2) - (3w3 - 6wz + 2wz2)   
       2w4 - 13wz - 6wz2   
       2w7 + w2z2 - 6w2z4   
       5w4 - 3w3 - wz - 6wz2   
       2w4 - wz - 6wz2   
  
  
**3.** **Multiply.**  
  
(x + 5)(x2 - x + 7)   
       x3 + 4x2 + 2x + 35   
       x3 + 35   
       x3 + 6x2 + 12x + 35   
       x3 + 4x2 + 35   
  
  
**4.** **Multiply.**  
  
(x2 - x - 3)(x - 1)   
       x3 - 2x2 - 4x - 3   
       x3 - 2x2 - 3x + 3   
       x3 - 2x2 - 2x + 3   
       x3 - 2x + 3   
  
  
**5.** **Simplify. Do not use negative exponents in your answer.**  
  
  
         
         
         
       125x9   
  
  
**6.** **Divide and, if possible, simplify. Assume all variables represent positive real numbers.**  
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**7.** **Multiply.**  
  
(5x-6y)(7y+8z)  
  
  
**8.** **Divide.**  
  
(x2 + 8x + 7) ÷ (x + 6)   
  
  
  
  
**9.** **Evaluate as requested.**  
  
Evaluate the polynomial 2x2- y2 + 2xy for x = -2 and y = -4.   
       -40   
       -24   
       8   
       40   
  
  
**10.** **Solve the problem.**  
  
A 3-ft by 6-ft picnic table is placed on an outdoor patio measuring x ft by x ft. Find a polynomial for the remaining open space on the patio (in square feet).   
       x2 + 9x + 18   
       x2 - 9   
       x2 + 18   
       x2 - 18   
  
  
**11.** **Factor completely. If the polynomial is prime, state this.**  
  
5x4 - 70x3 + 225x2   
  
  
  
  
**12.** **Factor completely. If the polynomial is prime, state this.**  
  
1/6 y3 – 1/6y2 - 5y   
  
  
  
  
**13.** **Factor by grouping.**  
  
t2 - 8t + 9t - 72   
  
  
  
  
**14.** **Solve by factoring and using the principle of zero products.**  
  
x2 + 6x - 16 = 0   
  
  
  
  
**15.** **Solve the problem.**  
  
A 20-ft ladder is leaning against a building. If the bottom of the ladder is 12 ft from the base of the building, how high does the ladder reach?   
  
  
