

Algebra 2  
5.5 Homework #2

Name: \_\_\_\_\_

Factor completely. If the polynomial is not factorable, write *prime*.

1. $15a^2b - 10ab^2$	2. $3st^2 - 9s^2t + 6$
3. $y^4 + 20y^2 + 96$	4. $4ab + 2a + 6b + 3$
5. $6p^2 - 17p - 45$	6. $8x^3 - 125$
7. $9x^2 - 25$	8. $x^2 - 8x - 8$

Factor then solve.

9. $y^4 - 7y^3 - 18y^2 = 0$	10. $k^5 + 4k^4 - 32k^3 = 0$
11. $m^4 - 625 = 0$	12. $n^4 - 49n^2 = 0$

**13.  $x^4 - 50x^2 + 49 = 0$**

**14.  $t^4 - 21t^2 + 80 = 0$**

**15.  $2x^4 - 12x^2 + 16 = 0$**

**16.  $x^6 - 49x^2 = 0$**

**17.  $y^4 - 5y^2 + 4 = 0$**

**18.  $2x^4 - 7x^2 - 30 = 0$**

**19.  $2x^3 + 3x^2 - 8x - 12 = 0$**

**20.** A standard shipping box measure  $x$  inches tall. The width is 3.5 inches more than the height, and the length is 3 inches more than the height. The volume of the box 561 cubic inches. What is  $x$ ?

