

Name: \_\_\_\_\_  
Additional HW for Tuesday, 12/2

Here is your checklist. On each problem, ask yourself the following:

- |         |             |                        |                |                            |
|---------|-------------|------------------------|----------------|----------------------------|
| 1) GCF? | 2) 4 Terms? | 3) Trinomial?          | 4) Binomial    | 5) Substitution            |
|         | a) GCF?     | a) GCF?                | a) GCF?        | a) 1 <sup>st</sup> &       |
|         |             | b) Leading Coeff. 1?   | b) Sum?        | middle                     |
|         |             | c) Perfect Square Tri. | c) Difference? | term sq/sq                 |
|         |             |                        | i) Squares?    | Root?                      |
|         |             |                        | ii) Cubes?     | b) binomial                |
|         |             |                        |                | in the 1 <sup>st</sup> sq. |
|         |             |                        |                | & 2 <sup>nd</sup> not sq.  |

Factor each of the following completely.

- 1)  $x^2 + xy + 6y^2$
- 2)  $m^2 - 7mn + 10n^2$
- 3)  $a^2 - 2ab + b^2$
- 4)  $y^2 - x^2$
- 5)  $18m^2n + 30mn + 9m + 15$
- 6)  $x^2 + 25$
- 7)  $1 - 4x^2$
- 8)  $8x^4y^4 + 24x^3y^4 - 32x^2y^4$
- 9)  $b^4 - b^3 - b + b^2$
- 10)  $2p^2 + 7p + 6$
- 11)  $-5p^6q^3 - 10p^4q^4 + 25pq^7$
- 12)  $-a^2 + 18a - 45$
- 13)  $a^6 - 144b^4$
- 14)  $10m^2p - 12mnp - 25mn + 30n^2$
- 15)  $x^2(x+3) + 3x(x+3) + 2(x+3)$
- 16)  $z^2 - 14z + 49$

$$17) 3x^2 + 27y^2$$

$$18) 36p^2q^2 + 12pq + 1$$

$$19) 3c(x - 4) + 2(x - 4)$$

$$20) 8m^8n^3 + 4m^7n^4 - 24m^6n^5$$

$$21) x^3 + 27y^3$$

$$22) 81x^3 - 1$$