

Name: Key

Date: \_\_\_\_\_

FACTOR (Look for GCF 1<sup>st</sup>)

**\* Answers only - work must be shown!! \***

1. $x^2 - 225$  $(x-15)(x+15)$	2. $3x^2 - 7x - 6$  $(3x+2)(x-3)$
3. $5x^2 + 5$  $5(x+i)(x-i)$	4. $x^2 - 196$  $(x+14)(x-14)$
5. $8x^2 - 200$  $8(x+5)(x-5)$	6. $4x^2 + 49$  $(2x+7i)(2x-7i)$

SOLVE BY FACTORING Plug answers back in to check! \*

7. $4x^2 - 121 = 0$  $x = \pm \frac{11}{2}$	8. $x^2 + 100 = 0$  $x = \pm 10i$
9. $2x^2 + 11x + 5 = 0$  $x = -\frac{1}{2}, -5$	10. $x^2 - 5x - 36 = 0$  $x = -4, 9$
11. $81x^2 + 16 = 0$  $x = \pm \frac{4}{9}i$	12. $16x^2 - 100 = 0$  $x = \frac{5}{2}, -\frac{5}{2}$
13. $10x - 24 = -x^2$  $x = 2, -12$	14. $4x^2 - 6x - 12 = x^2 - 2x + 3$  $x = -\frac{5}{3}, 3$