

\* Always look for a GCF first!

Ken

MATH 3 HOMEWORK - FACTORING - UNIT 1

FACTOR COMPLETELY

\* SHOW ALL WORK/STEPS

1.  $10x^2 - 90$

2.  $2x^2 + 5x - 3$

3.  $4x^2 + 7x + 3$

$10(x+3)(x-3)$

$(2x-1)(x+3)$

$(4x+3)(x+1)$

4.  $3m^2 + 17m + 10$

5.  $27a^2 - 9a + 18$

6.  $5x^3 - 40$

$(m+5)(3m+2)$

$9(3a^2 - a + 2)$

$5(x-2)(x^2+2x+4)$

7.  $-x^2 + 5x - 4$

8.  $16x^4 - 625y^4$

9.  $x^3 - 10x^2 + 13x$

$-(x-4)(x-1)$

$(4x^2+25y)(2x+5y)(2x-5y)$

$x(x^2-10x+13)$

10.  $x^3 + 2x^2 - 3x - 6$

11.  $x^3 + 64$

12.  $x^4 + 4x^2 - 12$

$(x^2-3)(x+2)$

$(x+4)(x^2-4x+16)$

$(x^2+6)(x^2-2)$

13. The area of a rectangle can be modeled by the expression  $4x^2 - 25$ . What are the side lengths of the rectangle?

$(2x+5)(2x-5)$

14. What is the perimeter of the rectangle from question #13?

$8x$

15. Is  $(2x-3)^2 - 64$  equivalent to  $(2x-11)(2x+5)$ ? Explain why or why not.

yes

16. Is it possible for a rectangle to have an area of  $2y^2 + 11y + 18$ , if the side lengths are binomials/ Explain.

NO