

## Review for Exam 4

### MA 098 ZNB

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1) Factor the following four term polynomial completely by grouping:  $x^3 - 3x^2 - x + 3$ .

2) Factor the following polynomial completely:  $x^4 - 18x^2 + 81$ .

3) Factor the following polynomial completely:  $13x^2 - 90x - 7$ .

4) Solve the equation  $3x^2 - 6 = 0$ .

5) Factor the following polynomial completely:  $4x^2 - 25$ .

6) Factor out the GCF of the polynomial:  $21xy^2 - 7xy + 14x^2y^2$ .

7) Factor the trinomial completely:  $x^2 + 14x + 49$ .

8) Factor the trinomial completely:  $x^2 - 3x - 40$ .

9) Solve the equation  $x^2 - 13x + 12 = 0$ .

10) Factor out the GCF to rewrite  $4x - 8$ .

11) Solve the equation  $(x - 2)(x + 4) = -9$ .

12) Completely factor  $4x^2 + 20x - 56$ .

13) Factor completely:  $x^2 - 7x + 2$ .

14) Factor completely:  $x^2 - 10x + 24$ .

15) The length of a rectangle is 3 five centimeters shorter than three times its width. The area of the rectangle is 12 square centimeters. What are its dimensions?

16) Factor the trinomial completely:  $x^2 - 7x + 12$ .

17) Factor  $x^2 - xy - 30y^2$ .

18) Solve the equation  $49x^2 - 4 = 0$ .

19) Factor the following binomial completely  $x^2 - 64$ .

20) The area of a square is 256 square meters. Find the length of its side.