

Your TA: _____

Seat #: -

Math 105 TOPICS IN MATHEMATICS

QUIZ – X (Take-Home)

April 6 (Mon), 2015

Due date: April 10 (Fri), 2015

Instructor: Yasuyuki Kachi

Line #: 52920.

ID # : _____

Name : _____

[I] (6pts) Expand:

(1) $(x^2 - 4)^2 =$ _____ .

(2) $(x^2 + 4x + 2)^2 =$ _____ .

(3) $(1 + x + x^2 + x^3 + x^4)^2$
= _____ .

[II] (2pts) Expand:

$(x - 2)(x + 3)^2 =$ _____ .

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[III] (2pts) Expand:

$$(x - 1)(x + 1)(x^2 + 1)(x^4 + 1) = \underline{\hspace{2cm}}.$$

[IV] (6pts) Expand:

$$(1) \quad (x^2 - \sqrt{2}x + 1)(x^2 + \sqrt{2}x + 1)(x^4 - 1) \\ = \underline{\hspace{2cm}}.$$

$$(2) \quad (x - \sqrt{2} - \sqrt{3})(x + \sqrt{2} - \sqrt{3})(x - \sqrt{2} + \sqrt{3})(x + \sqrt{2} + \sqrt{3}) \\ = \underline{\hspace{2cm}}.$$

[V] (4pts) Expand the following. (Show work or no credit. It suffices to extend the weighted Pascal “Review of Lectures – XXIV” page 9 to (row 7). Use the back of this sheet.)

$$(x + 1)(x + 2)(x + 3)(x + 4)(x + 5)(x + 6)(x + 7) \\ = \underline{\hspace{2cm}}.$$

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Work for [V].

