MATH 0270/1314 COLLEGE ALGEBRA Week 4 Fri 2/15/19

- max 2 extra credit this weekend

Quiz Prob 8

$(x+2)(x^2+3x+5)$ } 6 products before combining the like terms

EXAM #1 - cover P.2 & P.3
NEXT THURSDAY
ALLOWED TO USE NOTES

WEBASSIGN P3

#16. $(x^2-x+7)(x^2+x+7) = x^4+13x^2+49$

$$x^4 + x^3 + 7x^2$$
$$-x^3 - x^2 - 7x$$
$$7x^2 + 7x + 49$$
$$x^4 + 13x^2 + 49$$

- Commutative law multiplication
  $ab = ba$
- associative law of multiplication
  $(ab)\cdot c = a\cdot(bc)$

#18. $[(x+1)-y]^2$

$= [x+1-y]^2$

$= [x+1-y]\cdot[x+1-y] = x^2+y^2-2xy+1-2y+2x$

$$x^2 + x - xy$$
$$x + 1 - y$$
$$-yx - y + y^2$$
$$x^2 + 2x - 2xy + 1 - 2y + y^2$$

* keep each term of product in alphabetical order to keep track of $(xy = yx)$ like terms

* no order necessary for an expression with more than 1 variable to be in standard form

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$(4x-y)^3$

IN THIS PATTERN
REPLACE a with $(4x)$
REPLACE b with (y)

$= (4x)^3 - 3(4x)^2y + 3(4x)y^2 - y^3$

$= 64x^3 - 3\cdot 16x^2y + 3\cdot 4xy^2 - y^3$

$= 64x^3 - 48x^2y + 12xy^2 - y^3$

$(a+b)^3 = a^3 + 3a^2b + 3ab^2 + b^3$
descending order on a
ascending order on b

$(a-b)^3 = a^3 - 3a^2b + 3ab^2 - b^3$
every other term has "-"