Foundation of Math 9

Name: Key

Polynomials Introduction Review

For the following:

a) Perform the desired operation
b) Identify the degree of the individual terms in the answer
c) Put it in descending order
d) Name the degree of the polynomial

1. $(4 - 5x + 4x^2) + (-6x - 2 - 13x^2)$

$4 - 5x + 4x^2 - 6x - 2 - 13x^2$

$-9x^2 - 11x + 2$

Degree 2 Polynomial

Deg: 2 1 0

2. $(y^2 - 6y + 2) + (-3y^2 + 4 - 6y)$

$y^2 - 6y + 2 - 3y^2 + 4 - 6y$

$-2y^2 - 12y + 6$

Degree 2 Polynomial

Deg: 2 1 0

3. $(x^2y - 2xy + 3x - 4y) + (5x + 3y - 5xy + -5x^2y)$

$x^2y - 2xy + 3x - 4y + 5x + 3y - 5xy - 5x^2y$

$-4x^2y - 7xy + 8x - y$

Degree 3 Polynomial

Deg: 3 2 1 1

4. $(xyz - 4xy + 3x - 6y) - (-xy + 3x - 8y - 2xyz)$

$xyz - 4xy + 3x - 6y + xy - 3x + 8y + 2xyz$

$3xyz - 3xy + 2y$ Degree 3 Polynomial

Deg: 3 2 1

5. $(r^2 + 4s^2 - 2t^2) - (5r^2 - 4s^2 - 9t^2)$

$r^2 + 4s^2 - 2t^2 - 5r^2 + 4s^2 + 9t^2$ Degree 2 Polynomial

$-4r^2 + 8s^2 + 7t^2$

Deg: 2 2 2 ← Since all the same, alphabetical

6. $(-3x^2y^2 - 5x + 3y) + (5x - 3y + 7x^2y^2) - (4x^2y^2)$

$-3x^2y^2 - 5x + 3y + 7x^2y^2 - 4x^2y^2$

$5x + 3y$ Degree 1 Polynomial

Deg: 1 1

7. $(4a - 5b + 6c^2) - (5a^2 + 6b - c^2) - (5b^2) - (-2a^2 - 5c^2)$

$4a - 5b + 6c^2 - 5a^2 - 6b + c^2 - 5b^2 + 2a^2 + 5c^2$

$-3a^2 - 5b^2 + 12c^2 + 4a - 11b$ Deg 2 Polynomial

Deg: 2 2 2 1 1

8. $(xyz) + (xyz) - (xyz) - (5)$

$xyz + xyz - xyz - 5$

$xyz - 5$ Deg 3 Polynomial

Deg: 3 0