Math 9 Polynomial Quiz #1

Name:

1. List the number of terms **and** classify each polynomial. (½ mark each)

   a) $3x + 1$ b) $8ab - 2 + m$ /2

2. State the leading coefficient

   a) $-7x^2y^3 + 5x$ b) $-x^7y^5 + 4x^2y^3$ /2

3. State the constant term.

   a) $5x - 6y + 2$ b) $x^2y - 4$ /2

4. Is the expression a polynomial? Answer "***yes***" or "***no***". (½ mark each)

   a) $8a^{-2}b^9$ b) -4

   c) $-7m^2n^3 + \frac{3}{4}m^5$ d) $\frac{-2}{y^3}$ /2

5. State the degree of the polynomial.

   a) $cd + 64v$ b) $-2m^7n^6 + 23m^7n^3 - 76m^2n^8$

   c) $3m^2n^4 - 2mn^7$ d) $6x^5 + 4x^3 - 31x + 18$ /4

6. Create a polynomial that satisfies the criteria below.

   a) a monomial with degree 4 and a fractional coefficient

   b) a two variable binomial with a negative leading coefficient

   c) a three variable trinomial with a negative constant and a degree of six. /3

7. Order the polynomials in descending order.

a) $7x^3 - 4x^7 + 9x + 6x^2$

b) $-7y^9 + 13y^{12} - 6y^2 + 25$

/2

8. Circle the like terms.

a) a^2, $2a^4$, $6a$, $3a^2$, $2a^3$

b) $4x^2y$, $3xy$, $-5xy^2$, $2x^2y^2$, $\frac{1}{2}xy^2$

/2

9. Regroup the like terms and simplify the expression.

a) $7y^2 - 20y + 7 - 3y^2 - 8y - 3$

b) $7xy - 17 + xy - y + 3xy - 2y + 7$

c) $2j + k - j - k - j - 2$

d) $n^2 + n + 3m + n - m$

/4

10. Use Algebra Tiles to represent the terms, then simplify by collecting like terms.

■ = positive (+) □ = negative (-)

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

/2