

Directions: Select the letter of the correct answer for each question below.

1) Which of the following is quadratic?

- a) $3x - 5$
- b) $x^2 + 6x - 1$
- c) $2x^2y + xy$
- d) $-4a^2 - 3a^3$

2) Multiply $-2x$ by $(x - 9)$

- a) $-2x^2 + 18x$
- b) $-2x^2 - 18x$
- c) $2x^2 - 18x$
- d) None of the above

3) Add $3xy^2 + 2x + z$ and $xy^2 - z$

- a) $4x^2y + 2z$
- b) $4x^2y^2 - 2z$
- c) $4xy^2 + 2x$
- d) $4xy^2 + 2x - z$

4) Write $-3x^4y^2 + 2x^2y^3 - x^3y^4$ in standard form

- a) $-x^3y^4 - 3x^4y^2 + 2x^2y^3$
- b) $-3x^4y^2 - x^3y^4 + 2x^2y^3$
- c) $2x^2y^3 - 3x^4y^2 - x^3y^4$
- d) None of the above

5) What is the smallest possible whole number value of k so that $2x^3 + 4x^k - 3 = 0$ has a degree that is higher than that of a cubic polynomial?

- a) 1
- b) 2
- c) 3
- d) 4