

Lessons 3.1 - 3.3 Quiz Review**Identify the degree of each monomial.**

1) x^2

2) 3

3) a^2b^2

4) $7x$

5) $4x^2y$

**Classify each polynomial.**

6) $-4r + 6r^5 + 6 - 7r^2$

7) $-8 - 3x^2 - 10x$

Standard Form:
Degree:
Leading Coefficient:
Terms:
Name:

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**Add or subtract each polynomial.**

8) $(7m^2 - 6 - 5m^3 - 6m^4) - (6m^4 + 2 - 2m^2)$

9) $(4 - 7m^2 - 2m^4 - 5m^3) + (8m^4 - 6m^3 - 7m^2)$



10) $f(x) + g(x)$

$f(x) = 8 - 2x^4 - 6x^3$

$g(x) = 2 + 5x^3 + 8x^2$

11) $f(x) - g(x)$

$f(x) = 8x^4 + 5x^2 - 3x^3$

$g(x) = 6x^2 - 6x^3 - 2x^4$

Find each product.

12) $5x(6x^2 - 5x + 1)$

13) $7m^2(5m^2 - m + 4)$



14) $f(x) \cdot g(x)$

$f(x) = 2x - 4$

$g(x) = 4x^2 + x + 7$

15) $f(n) \cdot g(n)$

$f(n) = 2n^2 + 7n + 5$

$g(n) = 8n^2 - 4n - 2$



16) $(3x - 2)^3$

17) $(x + 3)^4$

Divide using synthetic division.

18) $(n^3 + 4n^2 + 9n + 16) \div (n + 2)$

19) $(v^4 + 9v^3 + 22v^2 + 11v - 10) \div (v + 2)$



20) $(x^5 - 4x^4 - x^2 - 4x + 25) \div (x - 4)$

21) $(2x^4 - 18x^3 - 3x + 30) \div (x - 9)$

Use synthetic substitution to evaluate the polynomial for the given value.

22) $P(n) = 2n^3 - 11n^2 + 11n + 7$ for $n = 4$

23) $P(a) = 5a^3 - 27a^2 + 10a + 5$ for $a = 5$



24) $P(a) = a^5 + 4a^4 + a^3 + 13a + 1$ for $a = -2$

25) $P(a) = a^6 + 7a^5 + 8a^4 + 2a^3 + 14a^2 + a$ for $a = -2$