

Fill in the blank.

1.) $x^2 + xy^4 - 22 + 3x^2$, has _____ terms.

2.) $8x^2y^3z + 2$ has a degree of _____.

3.) The coefficients of $7ab + 5 - 12a^3$ are _____, with a leading coefficient of _____.

4.) $-9m^4n - 14m^3$ is a _____ with a degree of _____.

Simplify. When finished, give the **name** and **degree** of the polynomial.

5.) $a^2 + 5x^2y^2 + (-5a^2 - 2x^2y^2)$

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

Multiply (Distribute).

7.) $(7x - 4)(5x + 10)$

8.) $-3b(10b^2 + b - 8)$

9.) $(2a + 11)(2a - 11)$

10.) $(x - 3)(x^2 + 3x - 4)$

Factor each polynomial completely.



11.) $m^2 - 19m + 90$

12.) $100b^2 - 144$

13.) $24r^3 - 64r^2 - 21r + 56$

14.) $15m^4 - 2m^3 - 24m^2$

Divide.

$$15.) (k^3 - 5k^2 + 8k + 4) \div (k - 1)$$

Solve the system (optional)

$$x - 2y - 3z = 6$$

$$2x - 2y - z = 3$$

$$2x - 2y + 3z = -17$$