

Module 5 Lessons 1-5 Review

Simplify. Your answer should contain only positive exponents.

1) $\frac{x^{-1}y^0 \cdot (-y^{-2})^2}{-yx^2}$

2) $\frac{(-2yx^3 \cdot -x^{-4}y^3)^{-4}}{y^3}$

3) $\left(\frac{2u^3v^3 \cdot -2v^{-2} \cdot -v^2}{u^{-1}v^3}\right)^2$

4) $\left(\frac{b \cdot 2a^{-2}}{2a^4b^{-4}}\right)^{-2}$

Simplify. Write each answer in scientific notation.

5) $(7 \times 10^4)(6.3 \times 10^5)$

6) $(3.72 \times 10^1)(7.4 \times 10^0)$

7) $(1.1 \times 10^6)(4.12 \times 10^2)$

8) $(4.2 \times 10^{-3})(6.3 \times 10^{-3})$

9) $\frac{7.1 \times 10^6}{1.2 \times 10^{-5}}$

10) $\frac{2.2 \times 10^{-3}}{2.4 \times 10^{-5}}$

11) $\frac{9.52 \times 10^5}{9 \times 10^0}$

12) $\frac{2.9 \times 10^4}{6 \times 10^6}$

State the degree of each polynomial and identify the polynomial as a monomial, binomial, or trinomial.

13) $-3x$

14) $9m^4 + 5m^3 - m$

15) -3

16) $b^4 - 2b^3$

17) $8p^2 + p - 9$

18) $-6x^6$

Simplify each expression.

19) $(3m - 3m^2 + 2m^4) + (5m - m^2 - 7m^4)$

20) $(n^2 - 5 - 2n^4) + (8n^2 + 4 + 8n^4)$

21) $(2v^2 + 2v^4 + 6v^3) - (8v^3 + 2v^2 + 5v^4)$

22) $(3a^2 + 8a + 6a^3) + (6a^4 + 2a - 2a^2)$

23) $(4 - 4v^2 + 6v^3) + (8v^4 + 1 - 4v) + (3v + 2v^3 - 5v^4 + 6v^2)$

24) $(7 + 7x^2 - 2x) + (4x - 3x^4 - 6) - (8x^2 + 7 + 4x - 8x^4)$