

# Practice Test

35.

Simplify.

$$\left(-\frac{1}{4}ab^3c^2\right)^5\left(-\frac{1}{4}ab^3c^2\right)^2$$

$$\left(-\frac{1}{4}ab^3c^2\right)^7$$

$$-\frac{1}{4^7}a^7b^{21}c^{14}$$

30.

Multiply these monomials.

$$(2m^7 n^2 p)(-3m^5 n^7 p^3)(2n^6 p^7)$$

$$-12m^{12} n^{15} p^{10}$$

3.

Evaluate.

$$\left(\frac{3}{-5}\right)^2 = +\frac{9}{25}$$

7.

Express with positive exponents. Then simplify, if possible.

$$\left(\frac{x}{w}\right)^{-2} = \left(\frac{w}{x}\right)^2 = \frac{w^2}{x^2}$$

39.

Multiply the polynomial by the monomial.

$$\frac{4b}{1} \left( b^5 - \frac{1}{8}b^3 - \frac{1}{12}b^2 - \frac{1}{20}b - 5 \right)$$

$$4b^6 - \frac{1}{2}b^4 - \frac{1}{3}b^3 - \frac{1}{5}b^2 - 20b$$

$$6. \quad -6^{-2} = -\frac{1}{6^2} = -\frac{1}{36}$$

$$5. \quad (-2)^{-3} = \frac{1}{(-2)^3} = \frac{1}{-8} = -\frac{1}{8}$$

59.

Divide these monomials.

$$\frac{12a^5bc^7}{33a^8bc^4}$$

$$\frac{4c^3}{11a^3}$$

9.

Identify the degree of each

$$\begin{array}{cccc} x^4 & -7x & +x^8 & -3x^5 \\ | & | & | & | \\ 4 & 1 & 8 & 5 \end{array}$$

8

33.

Simplify.

$$(2x^9)^3$$

$$2^3 x^{27} = 8x^{27}$$

34.

Simplify the expression.

$$\left(\frac{1}{4}s^4t\right)^2$$

$$\frac{1^2}{4^2} s^8 t^2 = \frac{1}{16} s^8 t^2$$

37.

Multiply the polynomial by the monomial.

$$+ \frac{1}{6} m (2m - 5n)$$

$$\frac{2}{6} m^2 - \frac{5}{6} mn = \frac{1}{3} m^2 - \frac{5}{6} mn$$

46.

Determine the conjugate of the binomial  
 $-9x + 2y$ .

$$-9x - 2y$$

45.

Multiply.

$$(s^2 + s - 1)(s^2 + 7s - 9)$$

$$s^4 + 7s^3 - 9s^2$$

$$s^3 + 7s^2 - 9s$$

$$-s^2 - 7s + 9$$

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$$s^4 + 8s^3 - 3s^2 - 16s + 9$$

55.

Divide and simplify.

$$\frac{x^5}{x^{-6}}$$

$$x^{5 - (-6)} = x^{5+6} = x^{11}$$

44.

Multiply.

$$(2x + 9)(4x^2 + 4x + 5)$$

$$8x^3 + 8x^2 + 10x$$

$$36x^2 + 36x + 45$$

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$$8x^3 + 44x^2 + 46x + 45$$

12.

Arrange the polynomial in descending order.  
coefficient.

$$\underbrace{x^5}_{\text{blue}} + \underbrace{x}_{\text{orange}} + \underbrace{2x^3}_{\text{green}} + \underbrace{5}_{\text{teal}} + \underbrace{6x^2}_{\text{purple}}$$

$$\Rightarrow x^5 + 2x^3 + 6x^2 + x + 5$$

leading coefficient: 1

32.

Simplify.

$$(-z^4)^6$$

$$+ z^{24}$$

17.

Add.

$$(-6x + 4) + (x^2 + x - 6)$$

$$x^2 - 5x - 2$$