

Simplify. Assume that no denominator is zero and that  $0^0$  is not considered.

1)  $8^5 \cdot 8^2$

1) \_\_\_\_\_

2)  $(8x^4)(7x^2)$

2) \_\_\_\_\_

3)  $\frac{20k^3}{5k}$

3) \_\_\_\_\_

4)  $\frac{16m^3p^2}{2m^{10}p}$

4) \_\_\_\_\_

Simplify the expression.

5)  $11^0 + 4^0$

5) \_\_\_\_\_

6)  $5x^0$

6) \_\_\_\_\_

Simplify.

7)  $(-3a^2)^3$

7) \_\_\_\_\_

8)  $(w^3z)^4(w^3z^6)$

8) \_\_\_\_\_

Simplify. Assume that no denominator is zero and that  $0^0$  is not considered.

9)  $\left(\frac{a^2}{b^3}\right)^4$

9) \_\_\_\_\_

10)  $\left(\frac{2x^3y^5}{9z^{10}}\right)^2$

10) \_\_\_\_\_

Simplify. Do not use negative exponents in your answer.

11)  $y^{-9} \cdot y^{-3}$

11) \_\_\_\_\_

12)  $(x^{-5}y^{-2})(x^9y^{-6})$

12) \_\_\_\_\_

13)  $\frac{p^2}{p^{-7}}$

13) \_\_\_\_\_

14)  $\frac{t^2}{t^5}$

14) \_\_\_\_\_

15)  $\frac{3x^{-5}}{y^{-6}z^{-4}}$

15) \_\_\_\_\_

16)  $(a^{-3})^{-7}$

16) \_\_\_\_\_

17)  $(x^{-2}y^{-3})^{-6}$

17) \_\_\_\_\_

18)  $\left(\frac{x^4y^2}{wz^3}\right)^{-4}$

18) \_\_\_\_\_

19)  $\left(\frac{s^{-4}}{t^{-6}}\right)^4$

19) \_\_\_\_\_

20)  $\left(\frac{2x^{-5}}{9y^{-4}z}\right)^0$

20) \_\_\_\_\_

Evaluate as requested.

21) Evaluate the polynomial  $yz + xy - z$  for  $x = 1$ ,  $y = 4$ , and  $z = 2$ .

21) \_\_\_\_\_

Determine the coefficient and the degree of the polynomial. Classify as monomial, binomial, or trinomial.

22)  $8w^7 + 3w^5 - w$

22) \_\_\_\_\_

Combine like terms. Write the answer in descending order.

23)  $3x^5 + 7x^2 - 8x^5$

23) \_\_\_\_\_

24)  $3y^6 - 5y^5 + 5y^5 + 7y^6$

24) \_\_\_\_\_

Add.

$$25) (-9 + 5n^5 - 2n^4) + (3n^5 - 9n^4 + 5)$$

25) \_\_\_\_\_

$$26) (5a^3 - 4a^2) + (4a^3 + 9a^2)$$

26) \_\_\_\_\_

Subtract.

$$27) (14n + 8n^7 - 16n^6) - (12n^6 + 4n^7 - 14n)$$

27) \_\_\_\_\_

$$28) (5x^5 + 7x^7 - 9 + 6x^6) - (-3 + 9x^6 + 9x^7 + 9x^5)$$

28) \_\_\_\_\_

Multiply.

$$29) 2y(y^5 + 6y + 5)$$

29) \_\_\_\_\_

$$30) (3x - 8)(x + 8)$$

30) \_\_\_\_\_

$$31) (4x + 11)(4x - 11)$$

31) \_\_\_\_\_

$$32) (p + 3q)(p - 3q)$$

32) \_\_\_\_\_

$$33) (4m + 3)^2$$

33) \_\_\_\_\_

$$34) (x - 3)(7x^2 + x + 7)$$

34) \_\_\_\_\_

## 35) Answers Chapter 4 Practice Test

35) \_\_\_\_\_

1.  $8^7$

12.  $\frac{x^4}{y^8}$

23.  $-5x^5+7x^2$

2.  $56x^6$

13.  $p^9$

24.  $10y^6$

3.  $4k^2$

14.  $\frac{1}{t^3}$

25.  $8n^5-11n^4-4$

4.  $\frac{8p}{m^7}$

15.  $\frac{3y^6z^4}{x^5}$

26.  $9a^3+5a^2$

5. 2

16.  $a^{21}$

27.  $4n^7-28n^6+28n$

6. 5

17.  $x^{12}y^{18}$

28.  $-2x^7-3x^6-4x^5-6$

7.  $-27a^6$

18.  $\frac{w^4z^{12}}{x^{16}y^8}$

29.  $2y^6+12y^2+10y$

8.  $w^{15}z^{10}$

19.  $\frac{t^{24}}{s^{16}}$

30.  $3x^2+16x-64$

9.  $\frac{a^8}{b^{12}}$

20. 1

31.  $16x^2-121$

10.  $\frac{4x^6y^{10}}{81z^{20}}$

21. 10

32.  $p^2-9q^2$

11.  $\frac{1}{y^{12}}$

22. coeff 8,3,-1

33.  $16m^2+24m+9$

degree 7  
trinomial

34.  $7x^3-20x^2+4x-21$