**ALGEBRA**

**CHAPTER 8**

**PROPERTIES OF EXPONENTS**

**Simplify each expression.**

1.  4.  7. 

2.  5.  8. 

3.  6.  9. 

**Evaluate each express for *m* = 4, *n* = 5, and *p* = -2**

10.  12. 

11.  13. 

**Simplify each expression.**

14. $\left(b^{7}\right)\left(b^{10}\right)$ 17. 

15. $a^{5}b^{3}ab$ 18. 

16.  19. 

20**.** $n^{6}∙\left(n^{-2}\right)^{7}$

21. 

22. 

23. 

24. ****

25. ****

26. 

27. $s^{4}∙t^{-5}∙st^{4}$

28. 

29. 

30. 

31. 

32. $\frac{\left(-2x^{3}\right)^{-2}\left(3^{2}xy^{4}\right)^{3}}{\left(2x^{2}\right)^{-3}}$

33. $\left(2^{3}a^{5}\right)^{2}\left(b^{-3}\right)^{4}\left(3^{0}a^{3}b^{2}\right)^{-4}$

34. $2m^{2}∙2m^{3}$

35. $4a^{3}b^{2}∙3a^{-4}b^{-3}$

36. $\left(4xy\right)^{-1}$

37. $\frac{2x^{4}y^{-4}z^{-3}}{3x^{2}y^{-3}z^{4}}$

38. $\frac{3x^{3}y^{-1}z^{-1}}{x^{-4}y^{0}z^{0}}$

39. $\left(x^{-2}y^{-3}\right)^{4}$

40. $\frac{2x^{2}y^{4}∙4x^{2}y^{4}∙3x}{3x^{-3}y^{2}}$

41. $ba^{4}∙\left(2ba^{4}\right)^{-3}$

42. $\left(2x^{0}y^{-1}\right)^{4}∙-2x^{5}y^{4}$

43. $2x^{2}y^{-2}∙\left(x^{-5}y^{-1}\right)^{-1}$

44. $a^{5}b^{5}∙-2ba^{-3}∙\left(2a^{4}\right)^{-2}$

45. $\left\{-2y^{-3}∙\left(x^{-1}y^{2}\right)^{-5}\right\}^{-4}$

46. $\left[2a^{-4}b^{5}∙\left(-a^{0}b^{-4}\right)^{5}\right]^{2}∙2a^{-2}b^{2}$

47. $\left(\left(-u^{5}v^{4}\right)^{2}∙-2v^{5}\right)^{4}$

48. $2x^{-3}y^{5}∙2x^{4}y^{-4}∙\left(-2x^{4}\right)^{4}$

49. $\left(\frac{2a^{3}b^{0}}{3a^{-2}b^{3}}\right)^{-2}∙\left(\frac{2a^{-4}b^{5}}{9a^{-1}b^{-2}}\right)^{2}$