

# HW5

1. exponent, base

11. a)  $3^3 = 27$

b)  $3^4 = 81$

12. a)  $5^3 = 125$

b)  $3^{-2} = \frac{1}{3^2} = \frac{1}{9}$

13. a) 1 b) -9

14. a)  $(8 \cdot 9)^2 = 72^2 = 5,184$

b)  $-\frac{27^3}{125} \cdot \frac{25}{9} = -\frac{3}{3} = -1$

15. a)  $3^5 = 243$

b)  $48 \cdot \frac{1}{-64} = -\frac{48}{64} = -\frac{6}{8} = -\frac{3}{4}$

23.  $-3(2)^3 = -3(8) = -24$

24.  $7(4^{-2}) = \frac{7}{16}$

25.  $6(10^0) = 6$

31. a)  $-125z^3$

b)  $5x^6$

32. a)  $9x^2$

b) 1

33. a)  $6y^2 \cdot 4$

$24y^2$

b)  $3x^2$

41. a)  $\frac{-8x^6}{4x^3} = -2x^3$

b)  $\frac{10}{x}$

42. a)  $\frac{32y^4}{y^2} = 32y^2$

b)  $\frac{5^3}{x^{-9}y^{12}} = \frac{125x^9}{y^{12}}$