Name: _____ Period: _____ Date: _____

Homework 11-1

Allen **Introduction to Exponents & Order of Operations** **Unit 11**

A. Make a factor tree for each of the following numbers.
B. Write your answer in exponential form.

1. 4

2. 24

3. 27

Tell whether each number is prime or composite.

4. 49

5. 23

6. 37

7. 120

Write each expression in exponential form.

8. $a \cdot a \cdot b \cdot a \cdot c \cdot c$

9. $3 \cdot j \cdot k \cdot 4 \cdot k \cdot j \cdot j \cdot m$

10. $hpphphh$

11. $6gh \cdot 2hgj$

Simplify each expression.

12. 5^3

13. $\sqrt{144}$

14. 8^2

15. $\sqrt{49}$

Simplify each exponent.

16. -4^2

17. -2^3

18. $(-3)^3$

19. -2^4

20. $(-3)^4$

21. $(-5)^2$

Use the order of operations to evaluate.

22. $4^2 + 2 \cdot 3$

23. $-2^3 - 6 + 18 \div 3$

24. $7 + 2(4 + 5)^2$

25. $(6 - 8)^2 + 16 \div 4$

26. $\frac{x^2}{3}$ for $x = -9$

27. $x^2 + 2x + 7$ for $x = 5$

28. $27 + 5(15 - 7)^2 \div 8$

29. $\frac{c^3}{2}$ for $c = -2$

30. $\sqrt{64} + 7$

31. $10 - \sqrt{36}$

32. $a - \sqrt{a}$ for $a = 25$

33. $\frac{\sqrt{64}}{64}$