Name _____ Class _____ Date _____

1-2 Homework

Simplify each expression.

1. 9^2 *81*

2. 8^3

3. $\left(\dfrac{7}{8}\right)^2$ *$\dfrac{49}{64}$*

4. $(4 + 3)^2$

5. $8 + 5(7)$

43

6. $\left(\dfrac{21}{3}\right) - 2(3)$

7. $11(3) - 3^2$

24

8. $\left(\dfrac{15}{5}\right)^3 - 6(2)^2$

9. $(3(4))^3$

1728

10. $3^4 - 2^4 \div 2^2$

Evaluate each expression for $x = 3$ and $y = 2$.

11. $x + 7$

12. $8 - y$

13. $\dfrac{x^3}{3} - 8$

1

14. $5(y)^3 - 6$

15. $-6(x)^2 + y^3 - 8$

−54

16. $\left(\dfrac{x+1}{y^2}\right)^2$

1-2 **Homework** (continued)

17. George is driving at an average speed of 62 miles per hour. Write an expression that would give his distance traveled for h hours. Make a table that records his distance for 3, 5.5, 7, and 8.5 hours.

$62h$

hours	distance
3	186
5.5	
7	
8.5	

Simplify each expression.

18. $5[(4+8) - 3^3]$

-75

19. $2[(7-10)^2 + 5]^2$

20. $[(32 \div 4)^3 - 500]^3$

21. $\left(\dfrac{2(-2)(4)}{12 - 4(2)} \right)^3$

22. The cost to rent a car is \$30 per day. Write an expression for the cost of renting a car for d days. Make a table to find how much it will cost to rent a car for 3, 5, 7, and 10 days.

Evaluate each expression for the given values of the variables.

23. $2(m+1) - n^3$; $m = -2$, $n = 3$

-29

24. $-3[(a-3)^2 + b]^2$; $a = 4$, $b = 6$

25. $-1\left[x^3 - \left(\dfrac{2y}{4} \right)^2 \right]$; $x = 5$, $y = -2$

26. $t[v^2 - (23 - v^2) + 3]$; $t = -2$, $v = 2$

27. Reasoning Show that the expressions $3m^2n^2$ and $5m^3 + 13m^2n$ are equal when $m = 2$ and $n = 5$.