

Name: \_\_\_\_\_

8A: Algebra 1

Date: \_\_\_\_\_

Period \_\_\_\_\_

## Homework

1) Molly said that  $5^4 \div 5 = 1^4$ . Do you agree with Molly? Explain.Simplify the following

2)  $\frac{m^{12}}{m^4} =$

3)  $x^7 \div x^7 =$

4)  $\frac{n^{10}}{n^9} =$

5)  $3^4 \div 3^2 =$

6)  $x^{5a} \div x^{2a} =$

7)  $r^c \div r^d =$

Simplify each expression by using the rules for multiplying and dividing powers with like bases. Leave your answer in exponential form.

8)  $\frac{2^3 \cdot 2^4}{2^2}$

9)  $\frac{5^8}{5^4 \cdot 5}$

10)  $\frac{4^5 \cdot 4^5}{(4^2)^4}$

Divide in each case

11)  $14x \div 7$

12)  $-36y^{10} \div 6y^2$

13)  $\frac{5x^2y^3}{-5y^3}$

14)  $\frac{cm + cn}{c}$

15)  $\frac{8c^2 - 12d^2}{-4}$

16)  $\frac{y^2 - 5y}{-y}$

17)  $\frac{4c^2d - 12cd^2}{4cd}$

18)  $\frac{25m^3 + 10m^2 - 5m}{5m}$

19)  $\frac{12x^4 - 3x^3 + 6x^2}{3x^2}$

20) If  $40ab$  chairs are arranged in  $5a$  rows with equal numbers of chairs in each row, represent the number of chairs in one row.