Section 3.2 Extra Practice

1. Write each expression as a single power. Then, evaluate.

	Single Power	**Evaluate**
a) $2^4 \times 2^4$	_____	_____
b) $(-4)^2 \times (-4)^2$	_____	_____
c) $6^2 \times 6$	_____	_____
d) $9^3 \times 9^3$	_____	_____

2. Write each expression as a product of two powers, then as a single power.

	Product of Two Powers	**Single Power**
a) $(3 \times 3 \times 3 \times 3)(3 \times 3)$	_____	_____
b) $(5 \times 5 \times 5 \times 5)(5 \times 5 \times 5 \times 5 \times 5 \times 5)$	_____	_____
c) $(8 \times 8 \times 8 \times 8 \times 8 \times 8)(8 \times 8 \times 8 \times 8 \times 8)$	_____	_____
d) $(11 \times 11 \times 11)(11 \times 11)$	_____	_____

3. Write each expression as a single power. Then, evaluate.

	Single Power	**Evaluate**
a) $3^4 \div 3^2$	_____	_____
b) $(-5)^3 \times (-5)^2$	_____	_____
c) $\left[(-2)^2\right]^3$	_____	_____
d) $8^2 \div 8^2$	_____	_____

Name: _____   Date: _____

4. Write each expression as a quotient of two powers, then as a single power.

	Quotient of Two Powers	**Single Power**

a) $(5 \times 5 \times 5 \times 5) \div (5 \times 5)$ _____   _____

b) $(7 \times 7 \times 7) \div (7 \times 7 \times 7)$ _____   _____

c) $\dfrac{8 \times 8 \times 8 \times 8 \times 8 \times 8 \times 8}{8 \times 8 \times 8 \times 8}$ _____   _____

d) $\dfrac{(2 \times 2 \times 2 \times 2 \times 2 \times 2)}{(2 \times 2 \times 2 \times 2 \times 2)}$ _____   _____

5. Complete the table.

Expression	**Repeated Multiplication**	**Two Powers**
a) $\left[3 \times (-4) \right]^2$		$3^2 \times (-4)^2$
b) $(4 \times 6)^2$	$4 \times 4 \times 6 \times 6$	
c) $\left(\dfrac{2}{3} \right)^5$		

6. Does $-8^2 = (-8)^2$? Justify your answer.

_____

_____