Name: _____ Date: _____

BLM 3–4

Section 3.2 Extra Practice

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

	Single Power	Evaluate
a) $2^4 \times 2^4$	$2^{4+4} = 2^{\square}$	_____
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) $(3 \times 3 \times 3 \times 3)(3 \times 3)$	$3^{\square} \times 3^{\square}$	$3^{\square+\square} = 3^{\square}$
b) $(5 \times 5 \times 5 \times 5)(5 \times 5 \times 5 \times 5 \times 5 \times 5)$		
c) $(8 \times 8 \times 8 \times 8 \times 8 \times 8)(8 \times 8 \times 8 \times 8)$		
d) $(11 \times 11 \times 11)(11 \times 11)$		

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

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

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Name: _____ Date: _____

BLM 3–4
(continued)

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

	Quotient of Two Powers	**Single Power**
a) $(5 \times 5 \times 5 \times 5) \div (5 \times 5)$	$5^{\square} \div 5^{\square}$	$5^{\square - \square} = 5^{\square}$
b) $(7 \times 7 \times 7) \div (7 \times 7 \times 7)$	_____	_____
c) $\frac{8 \times 8 \times 8 \times 8 \times 8 \times 8 \times 8}{8 \times 8 \times 8 \times 8}$	_____	_____
d) $\frac{(2 \times 2 \times 2 \times 2 \times 2 \times 2)}{(2 \times 2 \times 2 \times 2 \times 2)}$	_____	_____

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) $\left(\frac{2}{3}\right)^5$		

6. Does $-8^2 = (-8)^2$? Circle YES or NO. Give 1 reason for your answer.

_____

_____

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