Name: _____

Monomials

Simplify. Assume no variable is equal to zero.

1) $2^2 \bullet 2^x$

2) $2^{4x} \bullet 2^{5x} \bullet 2$

3) $(x+2)^{m+n} \bullet (x+2)^{m-n}$

4) $\frac{2^x}{2}$

5) $\frac{2^{x+1}}{2^{x-1}}$

6) $\frac{\left(3^{x+2}\right)^2}{\left(3^{x-2}\right)^2}$

Solve for K

7) $3.5 \bullet 3.5 \bullet 3.5 = 3.5^k$

8) $125 = 5^k$

9) $2 \bullet 2 \bullet 2 \bullet 3 \bullet 3 \bullet 3 = 6^k$

10) $\frac{2 \bullet 2 \bullet 2 \bullet 2}{4 \bullet 4 \bullet 4 \bullet 4} = \left(\frac{1}{2}\right)^k$

11) $100000000 = 10^k$

12) $x^{k-2} = x^{-k-4}$

13) $5^k \bullet 5^{-4} = \left(5^2\right)^{k+2}$

14) $2^k \bullet 8^k = 16^{k+1}$

43) What is the area of a rectangular field whose length is $5^6 m$ and width is $5^2 m$?

44) The magic square of products is a square where the products of numbers on each row, each column, and each diagonal are the same.

Complete the following square to obtain a magic square.

		7^4
	7^5	
7^6		7^2