



What is an Exponent?

Student Activity

Name _____

Class _____

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- b. Change the operation to addition and check your answer to 3a.

 - c. Try the operations of subtraction and division. Do either of these produce the same outcome for both expressions?

 - d. Find a mathematical argument to help decide whether exponents “distribute” over the four operations.
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4. Which of the following are true statements? Explain your reasoning in each case.
 - a. The product of two factors raised to a power is the same as the product of each factor raised to that power.

 - b. The sum of two squared numbers is the same as the square of the sum of the numbers.

 - c. The quotient of two numbers to a power can be thought of as the product of the numerator to the power and the power of the unit fraction corresponding to the denominator.

 - d. If you cube two numbers and then subtract, you will get the same answer as if you subtract the two numbers and then cube the answer.



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Activity 3 [Page 1.5]

1. Explain the difference among: $(7^3)^2$, $(7^2)^3$, $(3^7)^2$, and $(3^2)^7$. Use the file to help your thinking.

2. Do you agree or disagree with the following statements? Explain your thinking in each case.
 - a. The number 5 has no exponent.

 - b. If you have five sets where each set has four 15's, you will have nine 15's.

 - c. If a multiplication problem has two factors of 5 and two factors of 9, you could write the problem as two factors of 45.