@ Simple Lesson on Exponents: Begin Lessons with a few Inquiry Questions! @ **Exponents or Powers can be thought of as Special Multiplication!** 

$$4^0 = 1$$

$$4^1 = 4$$

$$4^2 = 16$$

$$4^0 = 1$$
  $4^1 = 4$   $4^2 = 16$  **a**  $7^0 = 1$   $7^1 = 7$   $7^2 = 49$  **a**  $9^0 = 1$   $9^1 = 9$   $9^2 = 81$ 

$$7^1 = 7$$

$$7^2 = 49$$

$$9^0 = 1$$

$$9^1 = 9$$

$$9^2 = 81$$

Any Number to a 0 Power is 1! Any Number to a 1 Power is itself! Any other Power is Repeated Multiplication!

$$4^2 = 16$$
 since  $4 \times 4 = 16$ 

$$7^2 = 49$$
 since  $7 \times 7 = 49$ 

$$4^2 = 16$$
 since  $4 \times 4 = 16$   $7^2 = 49$  since  $7 \times 7 = 49$   $9^2 = 81$  since  $9 \times 9 = 81$ 

Combine Exponential Concepts into ASMD problems to promote success and excitement!

$$9^0 + 6^2 =$$
  $6^2 / 3^1 =$   $6^2 / 3^1 =$ 

$$7^2-2^1=$$
\_\_\_\_

$$8^0 \times 4^2 =$$

$$6^2 / 3^1 = \underline{\hspace{1cm}}$$

@ Simple Lesson on Radicals: Begin Lessons with a few Inquiry Questions! @ Radicals or Square Roots can be thought of as a Special Division!

$$\sqrt{1}$$

$$\sqrt{4}$$

$$\sqrt{9}$$

$$\sqrt{16}$$

$$\sqrt{25}$$

$$\sqrt{36}$$

$$\sqrt{49}$$

$$\sqrt{1}$$
  $\sqrt{4}$   $\sqrt{9}$   $\sqrt{16}$   $\sqrt{25}$   $\sqrt{36}$   $\sqrt{49}$   $\sqrt{64}$   $\sqrt{81}$   $\sqrt{100}$ 

$$\sqrt{100}$$

$$\sqrt{9} = 3$$
 since  $3 \times 3 = 9$   $\sqrt{36} = 6$  since  $6 \times 6 = 36$   $\sqrt{81} = 9$  since  $9 \times 9 = 81$ 

$$\sqrt{36} = 6$$
 since 6 x 6 = 36

$$\sqrt{81} = 9$$
 since  $9 \times 9 = 81$ 

$$\sqrt{4} = ?$$
 Why?

$$\sqrt{25} = ?$$
 Why?

$$\sqrt{4} = ?$$
 Why?  $\sqrt{25} = ?$  Why?  $\sqrt{64} = ?$  Why?

Combine Basic Radical Concepts into ASMD problems to promote success & excitement!

$$\sqrt{36} + \sqrt{25} =$$

$$\sqrt{36} + \sqrt{25} =$$
  $\sqrt{49} - \sqrt{4} =$   $\sqrt{1} \times \sqrt{16} =$   $\sqrt{81} / \sqrt{9} =$ 

$$\sqrt{81}$$
 /  $\sqrt{9}$  = \_\_\_\_

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