

Name _____

Date _____

Patterns in Products with Many Zeros - Guided Lesson Explanation

Explanation#1

Step 1) First, we look to see what is being asked of us. We have to find the first missing number-

$$9 \text{ ones} \times 2 = 18 \text{ ones}$$

$$9 \times 2 = 18$$

Step 2) Now we can complete the pattern-

$$9 \text{ tens} \times 2 = 18 \text{ tens}$$

$$9 \times 2 = 180$$

$$9 \text{ hundreds} \times 2 = 18 \text{ hundreds}$$

$$9 \times 2 = 1,800$$

$$9 \text{ thousands} \times 2 = 18 \text{ thousands}$$

$$9 \times 2 = 18,000$$

$$9 \text{ ten thousands} \times 2 = 18 \text{ ten thousands}$$

$$9 \times 2 = 180,000$$

$$9 \text{ hundred thousands} \times 2 = 18 \text{ hundred thousands}$$

$$9 \times 2 = 1,800,000$$

$$9 \text{ millions} \times 2 = 18 \text{ millions}$$

$$9 \times 2 = 18,000,000$$



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Explanation#2

Step 1) First, we look to see what is being asked of us.

We have to look at the first equation. Next, we count how many places the decimal moves.

Step 2) When we divide, move the decimal point one place to the left for each zero in the divisor.

Step 3) Now we will see how many places the decimal moves.

$$20566. \longrightarrow 2.0566$$

The decimal moves four places. The missing number is 10,000.

Now, we can easily find the other numbers. When we divide by 10,000, the decimal point moves 4 places to the left.

$$205,660 \div 10,000 = 20.566$$

$$2,056,600 \div 10,000 = 205.66$$

$$20,566,000 \div 10,000 = 2,056.6$$

Explanation#3

Step 1) First we look to see what is being asked.

Step 2) To multiply by a power of ten, move the decimal point to the right one place for each zero.

Step 3) Now count the zeroes in 10. There is 1 zero on 10. Then, starting with 0.5., move the decimal point to the right.

$$0.5 \longrightarrow 5$$

10

X 0.5

5

So the answer is 5.

