LESSON MAKER PRO

Place Value Power

Use powers of 10 to track digits across place values.

GRADE 5 · 5.NBT.A

CCSS.Math.Content.5.NBT.A "Understand the place value system."

NAME _____ DATE _____

PLACES CHANGE BY TENS

Our base-ten system is built on tens. Moving one place left makes a digit's value 10 times as great, and moving one place right makes its value 1/10 as great. Use this pattern when you multiply or divide by 10, 100, or 1,000.

WORKED EXAMPLE

Find 7.31 × 100.

1. Multiplying by 10 moves each digit one place left: 7.31 × 10 = 73.1.
2. Multiplying by 100 means multiplying by 10 twice.
3. Move the digits one more place left: 73.1 × 10 = 731.

Answer: 731

PRACTICE 6 problems

1 What is the value of the 4 in 63.407?

ANSWER _____

2 Find 8.09 × 10.

ANSWER _____

3 Find 517.2 ÷ 10.

ANSWER _____

4 Write <, >, or = to compare: 6.305 ___ 6.35

ANSWER _____

5 Write 0.072 in expanded form using fractions.

ANSWER _____

6 A student says that 9.4 × 100 = 94. Is the statement correct? Explain.

ANSWER _____

APPLY IT Show your work

1 Ravi uploads a 4.06-minute skateboarding video. The app makes a preview that lasts 1/10 as long as the video. How many minutes does the preview last?

WORK SPACE

ANSWER _____

2 At a robotics competition, Team Pixel earns 0.825 bonus points in a trial. For final scoring, the trial score is multiplied by 1,000. What is the final score?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Nora says that 0.405 × 100 = 40.5. Mia says the answer is 4.05. Who is correct? Explain using place value.

WORK SPACE AND ANSWER

ANSWER KEY

Place Value Power

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PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	What is the value of the 4 in 63.407?	**0.4**
2	Find 8.09 × 10.	**80.9**
3	Find 517.2 ÷ 10.	**51.72**
4	Write <, >, or = to compare: 6.305 ___ 6.35	**<**
5	Write 0.072 in expanded form using fractions.	**7/100 + 2/1000**
6	A student says that 9.4 × 100 = 94. Is the statement correct? Explain.	**No. 9.4 × 100 = 940.**

PART 2 · APPLY IT

1. **0.406 minutes** Find 1/10 of 4.06 by dividing by 10. Move each digit one place right to get 0.406.
2. **825 points** Multiply 0.825 by 1,000. Move each digit three places left to get 825.

CHALLENGE

Nora is correct. Multiplying by 100 moves each digit two places left, so 0.405 becomes 40.5.

Accept equivalent place-value language, such as “four tenths” for 0.4. For expanded form, accept equivalent forms such as 0.07 + 0.002.