

## 5.NBT.A.2 ADDITIONAL PRACTICE Answer Key

Fill in the missing power of 10 so that each number sentence is true.

1)  $25 \times \underline{10^6} = 25,000,000$

2)  $123 \times \underline{10^2} = 12300$

3)  $8.32 \div \underline{10^5} = 0.0000832$

4)  $56 \div \underline{10^3} = 0.056$

5)  $10^4 \cdot 63.3145 = \underline{633,145}$

6)  $7.915 \div 10^3 = \underline{0.007915}$

7) Fill in the chart with each product.

Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones	
				2	4	$24 \times 1$
			2	4	0	$24 \times 10^1$
		2	4	0	0	$24 \times 10^2$
	2	4	0	0	0	$24 \times 10^3$

Explain the pattern you see between the powers of 10 and the zeros in each whole-number product.

The number of zeros in the whole-number product is the same as the power of 10. Multiplying a whole number by powers of 10 shifts the digits left that number of times, with trailing zeros after.

8) Fill in the chart with each product.

Hundreds	Tens	Ones	Tenths	Hundredths	
		0	6	5	$0.65 \times 1$
		6	5	0	$0.65 \times 10^1$
	6	5	0	0	$0.65 \times 10^2$
6	5	0	0	0	$0.65 \times 10^3$

Explain the pattern you see between the powers of 10 and the placement of the decimal in each product.

When a number is multiplied by a power of 10, the digits shift to the left that number of times, which makes it seem like the decimal is shifting to the right that same number of times.

How do you think this patterns will be different when dividing by powers of 10?

Dividing by a power of 10 will shift the digits right that number of times, making it seem like the decimal is shifting left.

## 5.NBT.A.2 ADDITIONAL PRACTICE (cont'd) Answer Key

**9)** Trina owns a clothing store. She bought 1,000 shirts for \$6,791 to sell in her store. Using your knowledge of the pattern of zeros:

**a)** How can you convert 1,000 to a power of 10?

**b)** How much did Trina pay per shirt?

- a) Three zeros in 1,000 so  $10^3$
- b) \$6.79

**10)** Trina now plans to sell those 1,000 shirts for \$8.98 each. Using your power of 10 from the previous question, how much money will she collect for selling her shirts?

$$10^3 \cdot \$8.98 = \$8,980$$