

Dividing by Powers of 10

Fill in the missing information below. You may use a calculator.

	Number Sentence	Number Sentence Without Exponents	Quotient/ Answer	Observations (How did the placement of the decimal change?)
1	$12.5 \div 10$	$12.5 \div \underline{\hspace{2cm}}$		The decimal moved ___ place(s) to the ___ in the answer
2	$12.5 \div 10^2$	$12.5 \div 100$ $\underline{\hspace{2cm}}$		The decimal moved ___ place(s) to the ___ in the answer
3	$12.5 \div 10^3$	$12.5 \div \underline{\hspace{2cm}}$		The decimal moved ___ place(s) to the ___ in the answer
4	$12.5 \div 10^4$	$12.5 \div \underline{\hspace{2cm}}$		The decimal moved ___ place(s) to the ___ in the answer
5	$12.5 \div 10^5$	$12.5 \div \underline{\hspace{2cm}}$		The decimal moved ___ place(s) to the ___ in the answer
6	$23.7 \div 10^2$	$23.7 \div \underline{\hspace{2cm}}$		The decimal moved ___ place(s) to the ___ in the answer
7	$23.7 \div 10^3$	$23.7 \div \underline{\hspace{2cm}}$		The decimal moved ___ place(s) to the ___ in the answer
8	$23.7 \div 10^4$	$23.7 \div \underline{\hspace{2cm}}$		The decimal moved ___ place(s) to the ___ in the answer
9	$23.7 \div 10^5$	$23.7 \div \underline{\hspace{2cm}}$		The decimal moved ___ place(s) to the ___ in the answer

Explain to a partner, if there are patterns of the placement of the decimal point when a decimal is divided by a power of 10. Discuss your best explanation and write it below. You may continue on the back if needed.

I observed _____.

We can generalize that when a number is divided by a power of ten,

the decimal _____.