

2016 Mathematics Standards of Learning
Algebra Readiness Formative Assessment

7.1a

1. Use your knowledge of powers of ten to complete the table below.

Exponential Form	Expanded Form	Fraction Form
10^{-4}		
	$\frac{1}{10} \times \frac{1}{10} \times \frac{1}{10}$	
		$\frac{1}{100}$

2. Mrs. Austin asked students to complete the following table for homework. When she checked Jacob's homework, Mrs. Austin noticed that he wrote the incorrect fraction for each power of ten.

Exponential Form	Fraction Form	Decimal Form
10^{-5}	$\frac{1}{10000}$	0.00001
10^{-4}	$\frac{1}{1000}$	0.0001
10^{-3}	$\frac{1}{100}$	0.001
10^{-2}	$\frac{1}{10}$	0.01
10^{-1}	$\frac{1}{1}$	0.01

Write the correct fractions on the table and a short explanation of some patterns or general rules Jacob can use to determine the fraction form of powers of ten in the future.

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3. Identify each statement that is equivalent to 10^{-3}

1,000	$\frac{1}{10^3}$	-3,000	0.001
$\frac{1}{300}$	-0.003	$\frac{1}{10} \times \frac{1}{10} \times \frac{1}{10}$	$\frac{-1}{10^3}$

4. Which is equivalent to 10^{-5} ?

- A. $\frac{-1}{10^5}$ and -0.00005
B. $\frac{1}{10^5}$ and 0.00005
C. $\frac{-1}{10^5}$ and -0.00001
D. $\frac{1}{10^5}$ and 0.00001

5. Which of the following is a true statement?

- A. $10^0 = 1$
B. $10^{-1} = 0.01$
C. $10^{-2} = 0.02$
D. $10^{-3} = 0.03$