

Content Standard	<p>MAFS.5.NBT <i>Number and Operations in Base Ten</i></p> <p>MAFS.5.NBT.1 <i>Understand the place value system.</i></p> <p>MAFS.5.NBT.1.2 Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.</p>	
Assessment Limits	Whole number exponents with a base of 10.	
Calculator	No	
Acceptable Response Mechanisms	Equation Response Multiple Choice Response Multi-Select Response Natural Language Response	
Context	No context	
Example		
Context	Working with numbers to the right of the decimal.	
Context easier	Working with numbers to the left of the decimal. Generally, multiplication is easier.	
Context more difficult	Working with numbers to the right and left of the decimal. Generally, division is more difficult.	
Sample Item Stem	Response Mechanism	Notes, Comments
What is the value of 10^2 ?	Equation Response	
What is 5.23×10^2 ?	Equation Response	
What is $0.000523 \div 10^2$?	Equation Response	
What is 0.0523×10^2 ?	Equation Response	
An equation is shown. $523 \div 10^{\square} = 52.3$ What is the value of the missing exponent?	Equation Response	

Grade 5 Mathematics Item Specifications
 Florida Standards Assessments

<p>Which is equivalent to multiplying a number by 10^3?</p> <p>A. Adding 10 three times B. Adding 3 ten times C. Multiplying by 10 three times D. Multiplying by 3 ten times</p>	<p>Multiple Choice Response</p>															
<p>When dividing a number by 10^3, how is the decimal point moved?</p> <p>A. 3 places to the right B. 3 places to the left C. 4 places to the right D. 4 places to the left</p>	<p>Multiple Choice Response</p>															
<p>David multiplies and divides original numbers by powers of 10 to create new numbers.</p> <table border="1"> <thead> <tr> <th>Original number</th> <th>New number</th> </tr> </thead> <tbody> <tr> <td>523</td> <td>523,000</td> </tr> <tr> <td>0.005</td> <td>5</td> </tr> <tr> <td>100</td> <td>0.001</td> </tr> <tr> <td>600</td> <td>60,000</td> </tr> <tr> <td>4.56</td> <td>4,560</td> </tr> <tr> <td>37.6</td> <td>3,760</td> </tr> </tbody> </table> <p>Which original numbers were multiplied by 10^3 to create the new numbers?</p>	Original number	New number	523	523,000	0.005	5	100	0.001	600	60,000	4.56	4,560	37.6	3,760	<p>Multi-Select Response</p>	
Original number	New number															
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