

8th Grade Module 1 – Integer Exponents and Scientific Notation

	4 - Mastery	3 - Proficient	2 - Basic	1 - Below Basic	0 - No Evidence
Topic A (8.EE.1)	<p>Meets all of the criteria in a Level 3</p> <p>Completes tasks including synthesis and evaluation</p>	<p>Write equivalent numerical expressions by doing more than one of the following in an expression:</p> <ul style="list-style-type: none"> • multiply terms with the same base. • divide terms with the same base. • simplify powers raised to a power. • simplify negative exponents. • simplify zero exponents. 	<p>Write equivalent numerical expressions by doing all of the following:</p> <ul style="list-style-type: none"> • multiply terms with the same base. • divide terms with the same base. • simplify powers raised to a power. • simplify negative exponents. • simplify zero exponents 	<p>Write equivalent numerical expressions by doing at least 3 of the following:</p> <ul style="list-style-type: none"> • multiply terms with the same base. • divide terms with the same base. • simplify powers raised to a power. • simplify negative exponents. • simplify zero exponents. 	<p>Shows no evidence of proficiency</p> <p>Little evidence of reasoning or application to solve the problem.</p>
Topic B (8.EE.3, 8.EE.4)	<p>Meets all of the criteria in a Level 3</p> <p>Completes tasks including synthesis and evaluation</p>	<p>Solve problems where both decimal and scientific notation are used involving all of the following</p> <ul style="list-style-type: none"> • addition/subtraction • multiplication/division • comparison <p>Interpret scientific notation using technology</p> <p><u>Specify appropriate units of size for measurements</u></p>	<p>Solve problems where both decimal and scientific notation are used involving 2 of the following</p> <ul style="list-style-type: none"> • addition/subtraction • multiplication/division • comparison <p>Interpret scientific notation using technology</p>	<p><u>Convert numbers between scientific notation to decimal form.</u></p> <p>Solve problems where scientific notation is used involving 2 of the following</p> <ul style="list-style-type: none"> • addition/subtraction • multiplication/division • comparison <p>Interpret scientific notation using technology</p>	<p>Shows no evidence of proficiency</p> <p>Little evidence of reasoning or application to solve the problem.</p>

8. EE.1 Know and apply the properties of integer exponents to generate equivalent numerical expressions.

8.EE.3 Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other.

8.EE.4 Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.