

**Unit 6: Expressions and Equations**[Open Up Family Resource Link](#)

Lesson	Skill	Online Resources	Standard
1	Use a tape diagram to represent a situation. Determine if an equation could represent a tape diagram.	<a href="https://www.youtube.com/watch?v=9a1mgxRKtkw">https://www.youtube.com/watch?v=9a1mgxRKtkw</a> <a href="https://www.youtube.com/watch?v=zCYVsfX-EFo">https://www.youtube.com/watch?v=zCYVsfX-EFo</a> <a href="https://www.youtube.com/watch?v=bVWvnijLPCw">https://www.youtube.com/watch?v=bVWvnijLPCw</a> <a href="https://ca.ixl.com/math/grade-6/write-and-solve-equations-that-represent-diagrams">https://ca.ixl.com/math/grade-6/write-and-solve-equations-that-represent-diagrams</a>	6.EE.B.6
2	Substitute a variable in an equation with a number that makes the equation true, and know that this number is called a solution to the equation.	<a href="https://www.youtube.com/watch?v=U9OfQd8poTQ">https://www.youtube.com/watch?v=U9OfQd8poTQ</a> <a href="https://www.khanacademy.org/math/algebra/one-variable-linear-equations/alg1-intro-equations/e/testing-solutions-of-equations-inequalities">https://www.khanacademy.org/math/algebra/one-variable-linear-equations/alg1-intro-equations/e/testing-solutions-of-equations-inequalities</a> <a href="https://ca.ixl.com/math/grade-6/does-x-satisfy-an-equation">https://ca.ixl.com/math/grade-6/does-x-satisfy-an-equation</a> <a href="https://ca.ixl.com/math/grade-6/which-x-satisfies-an-equation">https://ca.ixl.com/math/grade-6/which-x-satisfies-an-equation</a>	6.EE.B.5
3	Write equations that could represent the weights on a balanced hanger.	<a href="https://www.youtube.com/watch?v=l2VNCnXve-U">https://www.youtube.com/watch?v=l2VNCnXve-U</a> <a href="https://www.khanacademy.org/math/algebra/one-variable-linear-equations/alg1-solving-equations/v/why-we-do-the-same-thing-to-both-sides-simple-equations">https://www.khanacademy.org/math/algebra/one-variable-linear-equations/alg1-solving-equations/v/why-we-do-the-same-thing-to-both-sides-simple-equations</a>	6.EE.B.5, 6.EE.B.6, 6.EE.B.7
4	Solve equations that have whole numbers, fractions, and decimals.	<a href="https://www.khanacademy.org/math/algebra/one-variable-linear-equations/alg1-solving-equations/v/one-step-equation-intuition">https://www.khanacademy.org/math/algebra/one-variable-linear-equations/alg1-solving-equations/v/one-step-equation-intuition</a> <a href="https://www.ixl.com/math/grade-6/solve-one-step-equations-with-whole-numbers">https://www.ixl.com/math/grade-6/solve-one-step-equations-with-whole-numbers</a> <a href="https://ca.ixl.com/math/grade-6/solve-one-step-equations-with-decimals">https://ca.ixl.com/math/grade-6/solve-one-step-equations-with-decimals</a> <a href="https://ca.ixl.com/math/grade-6/solve-one-step-equations-with-whole-numbers">https://ca.ixl.com/math/grade-6/solve-one-step-equations-with-whole-numbers</a>	6.EE.B, 6.EE.B.5, 6.EE.B.6, 6.EE.B.7, 6.NS.B.3
5	Understand complex fractions Make up a story that an equation might represent, explain what the variable represents in the story, and solve the equation.	<a href="https://www.khanacademy.org/math/7th-engage-ny/engage-7th-module-2/7th-module-2-topic-b/v/making-sense-of-hairy-fractions">https://www.khanacademy.org/math/7th-engage-ny/engage-7th-module-2/7th-module-2-topic-b/v/making-sense-of-hairy-fractions</a> <a href="https://www.khanacademy.org/math/pre-algebra/pre-algebra-equations-expressions/pre-algebra-alg-expression-word-problems/v/more-fancy-">https://www.khanacademy.org/math/pre-algebra/pre-algebra-equations-expressions/pre-algebra-alg-expression-word-problems/v/more-fancy-</a>	6.EE.B, 6.EE.B.5, 6.EE.B.6, 6.EE.B.7

		<a href="https://www.khanacademy.org/math/pre-algebra/pre-algebra-equations-expressions/pre-algebra-alg-expression-word-problems/e/writing-basic-algebraic-expressions-word-problems-2">expressions-from-word-problems</a> <a href="https://www.khanacademy.org/math/pre-algebra/pre-algebra-equations-expressions/pre-algebra-alg-expression-word-problems/e/writing-basic-algebraic-expressions-word-problems-2">https://www.khanacademy.org/math/pre-algebra/pre-algebra-equations-expressions/pre-algebra-alg-expression-word-problems/e/writing-basic-algebraic-expressions-word-problems-2</a>	
6	Use expressions to represent and solve word problems.	<a href="https://www.khanacademy.org/math/pre-algebra/pre-algebra-equations-expressions/pre-algebra-alg-expression-word-problems/v/writing-basic-expressions-from-word-problems-examples">https://www.khanacademy.org/math/pre-algebra/pre-algebra-equations-expressions/pre-algebra-alg-expression-word-problems/v/writing-basic-expressions-from-word-problems-examples</a> <a href="https://www.khanacademy.org/math/pre-algebra/pre-algebra-equations-expressions/pre-algebra-alg-expression-word-problems/e/writing-expressions-with-variables-word-problems">https://www.khanacademy.org/math/pre-algebra/pre-algebra-equations-expressions/pre-algebra-alg-expression-word-problems/e/writing-expressions-with-variables-word-problems</a>	6.EE.A.2.a, 6.EE.A.2.c, 6.EE.B.6
7	Solve percent problems by writing and solving an equation.	<a href="http://virtualnerd.com/pre-algebra/percents/equation/equation-examples/percent-equation-definition">http://virtualnerd.com/pre-algebra/percents/equation/equation-examples/percent-equation-definition</a> <a href="https://www.youtube.com/watch?v=fLI7OZlxDtq">https://www.youtube.com/watch?v=fLI7OZlxDtq</a> <a href="https://www.ixl.com/math/grade-7/solve-percent-equations">https://www.ixl.com/math/grade-7/solve-percent-equations</a>	6.EE.B.6, 6.EE.B.7, 6.RP.A.3.c
8	Explain what it means for two expressions to be equivalent.	<a href="https://www.youtube.com/watch?v=D269kESwjNU">https://www.youtube.com/watch?v=D269kESwjNU</a> <a href="https://www.ixl.com/math/grade-6/identify-equivalent-expressions">https://www.ixl.com/math/grade-6/identify-equivalent-expressions</a>	6.EE.A.4, 6.EE.B.5
9	Use a diagram of a rectangle split into two smaller rectangles to write different expressions representing its area.  I can use the distributive property to help do computations in my head.	<a href="https://www.frontporchmath.com/topics/arithmetic/multiplication/introduction-distributive-property-whole-numbers-video/">https://www.frontporchmath.com/topics/arithmetic/multiplication/introduction-distributive-property-whole-numbers-video/</a> <a href="https://www.khanacademy.org/math/cc-third-grade-math/3rd-geometry/cc-third-grade-area-distributive-property/v/area-of-rectangles-and-the-distributive-property">https://www.khanacademy.org/math/cc-third-grade-math/3rd-geometry/cc-third-grade-area-distributive-property/v/area-of-rectangles-and-the-distributive-property</a> <a href="https://www.khanacademy.org/math/cc-third-grade-math/3rd-geometry/cc-third-grade-area-distributive-property/e/area-and-the-distributive-property">https://www.khanacademy.org/math/cc-third-grade-math/3rd-geometry/cc-third-grade-area-distributive-property/e/area-and-the-distributive-property</a>	6.EE.B
10	Use a diagram of a split rectangle to write different expressions with variables representing its area.	<a href="https://www.youtube.com/watch?v=WSEpAKvE2Z4">https://www.youtube.com/watch?v=WSEpAKvE2Z4</a> <a href="https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-factoring/v/factoring-algebraic-expressions">https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-variables-expressions/cc-7th-factoring/v/factoring-algebraic-expressions</a>	6.EE.A.2, 6.EE.A.3, 6.EE.A.4
11	Use the distributive property to write equivalent expressions with variables.	<a href="https://www.youtube.com/watch?v=qw893STHN9w">https://www.youtube.com/watch?v=qw893STHN9w</a>	6.EE.A.2, 6.EE.A.3, 6.EE.A.4

		<a href="https://www.youtube.com/watch?v=v2jtbhdRySY">https://www.youtube.com/watch?v=v2jtbhdRySY</a> <a href="https://www.youtube.com/watch?v=UqY0DDjxLGY">https://www.youtube.com/watch?v=UqY0DDjxLGY</a> <a href="https://www.ixl.com/math/algebra-1/distributive-property">https://www.ixl.com/math/algebra-1/distributive-property</a>	
12	<p>Understand the meaning of an expression with an exponent like <math>3^5</math>.</p> <p>Evaluate expressions with exponents and write expressions with exponents that are equal to a given number.</p>	<a href="https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-arithmetic-operations/modal/v/comparing-exponent-expressions">https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-arithmetic-operations/modal/v/comparing-exponent-expressions</a> <a href="https://www.youtube.com/watch?v=fA2QcNusDRU">https://www.youtube.com/watch?v=fA2QcNusDRU</a>	6.EE.A.1
13	Decide if expressions with exponents are equal by evaluating the expressions.	<a href="https://ca.ixl.com/math/grade-6/evaluate-exponents">https://ca.ixl.com/math/grade-6/evaluate-exponents</a>	6.EE.A.1
14	<p>Evaluate expressions that have both an exponent and multiplication or division.</p> <p>Evaluate expressions that have both an exponent and addition or subtraction.</p>	<a href="https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-arithmetic-operations/modal/v/order-of-operations-with-exponents-examples">https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-arithmetic-operations/modal/v/order-of-operations-with-exponents-examples</a> <a href="https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-arithmetic-operations/modal/v/order-of-operations">https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-arithmetic-operations/modal/v/order-of-operations</a> <a href="https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-arithmetic-operations/cc-6th-order-of-operations/e/evaluating-numerical-expressions-with-exponents">https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-arithmetic-operations/cc-6th-order-of-operations/e/evaluating-numerical-expressions-with-exponents</a>	6.EE.A.1, 6.EE.A.2.c
15	Replace a variable with a number in an expression with exponents and operations and use the correct order to evaluate the expression.	<a href="http://virtualnerd.com/common-core/grade-6/6_EE-expression-equations/A/2/2c/evaluate-exponents-expression-example">http://virtualnerd.com/common-core/grade-6/6_EE-expression-equations/A/2/2c/evaluate-exponents-expression-example</a> <a href="https://www.youtube.com/watch?v=0uCsIW40VHQ">https://www.youtube.com/watch?v=0uCsIW40VHQ</a> <a href="https://www.youtube.com/watch?v=kRwmbS9X4m4">https://www.youtube.com/watch?v=kRwmbS9X4m4</a>	6.EE.A.1, 6.EE.A.2.c, 6.EE.B.5
16	<p>Create tables and graphs that show the relationship between two amounts in a given ratio.</p> <p>Write an equation with variables that shows the relationship between two amounts in a given ratio.</p>	<a href="https://www.khanacademy.org/math/pre-algebra/pre-algebra-ratios-rates/pre-algebra-ratios-intro/v/solving-ratio-problems-with-tables-exercise-3">https://www.khanacademy.org/math/pre-algebra/pre-algebra-ratios-rates/pre-algebra-ratios-intro/v/solving-ratio-problems-with-tables-exercise-3</a> <a href="https://www.khanacademy.org/math/pre-algebra/pre-algebra-ratios-rates/pre-algebra-ratio-word-problems/v/ratios-on-coordinate-plane">https://www.khanacademy.org/math/pre-algebra/pre-algebra-ratios-rates/pre-algebra-ratio-word-problems/v/ratios-on-coordinate-plane</a> <a href="https://www.khanacademy.org/math/pre-algebra/pre-algebra-ratios-rates/pre-algebra-ratio-word-problems/e/ratios-on-coordinate-plane">https://www.khanacademy.org/math/pre-algebra/pre-algebra-ratios-rates/pre-algebra-ratio-word-problems/e/ratios-on-coordinate-plane</a> <a href="https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-ratio-proportion/cc-7th-equations-of-proportional-relationships/v/equations-of-proportional-relationships">https://www.khanacademy.org/math/cc-seventh-grade-math/cc-7th-ratio-proportion/cc-7th-equations-of-proportional-relationships/v/equations-of-proportional-relationships</a>	6.EE.C.9, 6.RP.A.3.b

17	<p>Create tables and graphs to represent the relationship between distance and time for something moving at a constant speed.</p> <p>Write an equation with variables to represent the relationship between distance and time for something moving at a constant speed.</p>	<p><a href="https://www.youtube.com/watch?v=I93-BkAJ3UY">https://www.youtube.com/watch?v=I93-BkAJ3UY</a></p> <p><a href="http://virtualnerd.com/intro-physics/motion-constant-velocity/speed-given-distance-time-example.php">http://virtualnerd.com/intro-physics/motion-constant-velocity/speed-given-distance-time-example.php</a></p> <p><a href="https://www.youtube.com/watch?v=4pDGVOWgheA">https://www.youtube.com/watch?v=4pDGVOWgheA</a></p> <p><a href="http://virtualnerd.com/algebra-1/linear-equations-solve/isolate-variables-formulas-examples/formulas-examples/time-from-distance-and-speed">http://virtualnerd.com/algebra-1/linear-equations-solve/isolate-variables-formulas-examples/formulas-examples/time-from-distance-and-speed</a></p>	6.EE.C.9, 6.RP.A.3.b