

# enVision Algebra I Day by Day –Semester 2 | 2024–2025

Day	Date	Section	Topic	Standard	Notes/Enrichment
<b>TOPIC 6: Exponents and Exponential Functions</b>					
<b>Higher Order Questions:</b> <ol style="list-style-type: none"> <li>How can you identify and apply the appropriate property to simplify exponent expressions?</li> <li>Explain the connection between radicals and exponents.</li> <li>How can you write an exponential equation to represent a real-world situation?</li> <li>Why will an exponential decay situation never equal zero?</li> <li>How do you apply the geometric sequence to find a term in the sequence?</li> </ol>			<b>Vocabulary:</b> exponents, growth, decay, geometric sequence, common ratio, exponential functions, constant ratio, growth or decay factor, asymptote, rational exponent, radical		<b>Skills Previously Taught:</b> <ul style="list-style-type: none"> <li>Properties of Exponents</li> </ul>
1	A: 1/7 B: 1/8	<i>Flex Day for Winter MAP Testing</i>			
2	A: 1/9 B: 1/10	6.0	Properties of Exponents (supplement)	8.EE.1, N.1	
3	A: 1/13 B: 1/14	6.0	Properties of Exponents (supplement)	8.EE.1, N.1	
4	A: 1/15 B: 1/16	6.1	Rational Expressions/STEM	N.1, N.2	
5	A: 1/17 B: 1/21	6.2	Radical Expressions	N.2	
6	A: 1/22 B: 1/23	6.3	Exponential Functions	F.5b, F.6, F.14, A.15	<b>ADD AVERAGE RATE OF CHANGE</b>
7	A: 1/24 B: 1/27	6.4	Exponential Growth and Decay	N.6, F.5b, F.11c, A.15	3 ACT Math Task (one per unit) <a href="#">3 ACT Math Task Dan Meyer</a>
8	A: 1/28 B: 1/29	6.5	Geometric Sequences	F.6a, F.7, F.12	

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9	<b>A:</b> 1/30 <b>B:</b> 1/31	<b>Review Topic 6</b>	
10	<b>A:</b> 2/3 <b>B:</b> 2/4	<b>Topic 6 Test (Exponents and Exponential Functions)</b>	

## TOPIC 7: Polynomials

<b>Higher Order Questions:</b>					
<ol style="list-style-type: none"> <li>1. Explain how to name a polynomial.</li> <li>2. How can the distributive property be applied to polynomial multiplication</li> <li>3. What is the relationship between factoring and multiplying?</li> <li>4. How can the signs of the numbers help you to factor the quadratic trinomial?</li> <li>5. How can you use factoring by grouping to factor a quadratic trinomial?</li> </ol>				<b>Vocabulary:</b> polynomials, terms, degrees, factor, greatest common factor, trinomial, quadratic, standard form	<b>Skills Previously Taught:</b>
11	<b>A:</b> 2/5 <b>B:</b> 2/6	7.1	Adding and Subtracting Polynomials	A.1, A.3, A.5	Algebra-Tiles and continue Cover vocab in new standard <a href="#">7.1 Doodle Notes</a>
12	<b>A:</b> 2/7 <b>B:</b> 2/10	7.2/7.3	Multiplying Polynomials/Multiplying Special Cases	A.2, A.5	
13	<b>A:</b> 2/11 <b>B:</b> 2/12	7.4	Factoring Polynomials (Factoring out the GCF)	A.10(+), A.11(+)	
14	<b>A:</b> 2/13 <b>B:</b> 2/14	7.4	Factoring by Grouping (supplement)	A.10(+), A.11(+)	7.5, 7.6, 7.7 and 3ACT can be taught in any order per teacher discretion.  3 ACT Math Task (one per unit)
15	<b>A:</b> 2/18 <b>B:</b> 2/19	7.5	Factoring $x^2 + bx + c$	A.10(+), A.11(+)	
16	<b>A:</b> 2/20 <b>B:</b> 2/21	7.6	Factoring $ax^2 + bx + c$	A.10(+), A.11(+)	
17	<b>A:</b> 2/24 <b>B:</b> 2/25	7.7	Factoring Special Cases	A.10(+), A.11(+)	

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18	<b>A:</b> 2/26 <b>B:</b> 2/27	<b>Review Topic 7</b>	
19	<b>A:</b> 2/28 <b>B:</b> 3/3	<b>Topic 7 Test (Polynomials and Factoring)</b>	

## TOPIC 8: Quadratic Functions

<b>Higher Order Questions:</b> <ol style="list-style-type: none"> <li>1. How can you tell if a function is linear, exponential and quadratic by looking at a graph, equation, or table?</li> <li>2. How can you determine if a quadratic function has a maximum or minimum by looking at the equation?</li> <li>3. Explain how to find the vertex from standard form of a quadratic.</li> <li>4. How can you tell if a square root is simplified?</li> </ol>	<b>Vocabulary:</b> axis of symmetry, quadratic function, vertex, vertex form, parabola, standard form	<b>Skills Previously Taught:</b>
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20	<b>A:</b> 3/4 <b>B:</b> 3/5	<b>8.5</b>	Linear, Exponential, and Quadratic Models	F.11a, b, F.13	(can teach at the beginning or end of unit) <b>ADD AVERAGE RATE OF CHANGE</b>
21	<b>A:</b> 3/6 <b>B:</b> 3/7	8.1	Key Features of a Quadratic Function	F.5, F.8	STEM (one per semester)
22	<b>A:</b> 3/10 <b>B:</b> 3/11	<b>8.2/8.3</b>	Quadratic Functions in Vertex Form and in Standard Form	F.4, F.8	3 ACT Math Task (one per unit)
23	<b>A:</b> 3/12 <b>B:</b> 3/13		Topic 8 Review		
24	<b>A:</b> 3/17 <b>B:</b> 3/18	<b>Topic 8 Test (Quadratic Functions)</b>			
25	<b>A:</b> 3/19 <b>B:</b> 3/20	<i>FLEX Day for ACT</i>			

## TOPIC 9: Quadratic Equations

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<b>Higher Order Questions:</b> <ol style="list-style-type: none"> <li>1. Explain when each method of solving quadratic equations would be best.</li> <li>2. Given the graph of a quadratic, explain how to write the equation in factored form</li> <li>3. What is the relationship between factoring and multiplying?</li> <li>4. How many solutions can a quadratic have? How can this be determined from the discriminant?</li> <li>5. How can you write a quadratic equation that models a situation?</li> </ol>				<b>Vocabulary:</b> quadratic equation, zeros of a function, zero-product property, product property of square roots, completing the square (8 <sup>th</sup> grade), discriminant, quadratic formula, root, linear-quadratic system	<b>Skills Previously Taught:</b> <ul style="list-style-type: none"> <li>• simplifying square roots when the radicand is a perfect square</li> <li>• solving quadratics by taking the square root when the radicand is a perfect square</li> </ul>
26	<b>A:</b> 3/21 <b>B:</b> 3/24	9.1	Solving Quadratic Equations Using Graphs and Tables	A.3, A.7, A.19	STEM (one per semester) T-shirt Launcher Suggested Note: Relate every method back to 9.1 where the x-intercepts
27	<b>A:</b> 3/25 <b>B:</b> 3/26	9.2 and 6.2 if not taught previously	Solving Quadratic Equations by Factoring	A.3, A.7, A.19	STEM (one per semester) T-shirt Launcher Suggested Note: Relate every method back to 9.1 where the x-intercepts
28	<b>A:</b> 3/27 <b>B:</b> 3/28	Supplement	Rewriting Radicals	N.2	Can be taught in Topic 8 or 9 (teacher preference)
29	<b>A:</b> 3/31 <b>B:</b> 4/1	9.3 - HS 9.4 - MS	Solving Quadratic Equations Using Square Roots for HS students Completing the Square for MS students	A.19	(+) Middle School add completing the square
30	<b>A:</b> 4/2 <b>B:</b> 4/3		Quadratics FAL		Can be done at any time in unit
31	<b>A:</b> 4/4 <b>B:</b> 4/14	<i>FLEX Day for Review for Benchmark Standard Assessment/FLEX DAY/Spring MAP for students not at the 70th percentile</i>			
32	<b>A:</b> 4/15 <b>B:</b> 4/16	<b>FLEX Day for Spring Benchmark Standard Assessment Window around Pi Day</b>			

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33	A: 4/17 B: 4/18	9.5	The Quadratic Formula and the Discriminant	A.19, N.6	
34	A: 4/21 B: 4/22	9.5	The Quadratic Formula and the Discriminant	A.12	
35	A: 4/23 B: 4/24	9.6	Solving Systems of Linear and Quadratic Equations	A.21, A.24	3 ACT Math Task (one per unit)
36	A: 4/25 B: 4/28	Topic 9 Review			
37	A: 4/29 B: 4/30	Topic 9 Test (Solving Quadratic Equations)			

## TOPIC 11: Statistics

<p><b>Higher Order Questions:</b></p> <ol style="list-style-type: none"> <li>1. How can you determine the best plot for the data?</li> <li>2. Can you compare different types of data displays together?</li> <li>3. How can a model help me represent and investigate relationships between varying quantities?</li> <li>4. Why is it important interpret standard deviation with a set of data in real world situation?</li> </ol>	<p><b>Vocabulary:</b> normal distribution, standard deviation, stem plot, dot plot, histogram, box plot, measure of center, spread, outlier, variance, mean, median, interquartile range, range, mode, skew</p>	<p><b>Skills Previously Taught:</b></p> <ul style="list-style-type: none"> <li>• Finding mean, median, mode (quantitative measures of center)</li> <li>• Construct stem and leaf plots, box plots, dot plots and histograms</li> </ul>
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38	A: 5/1 B: 5/2	11.0	Measures of Center and Spread	SP.1	Creating stem plots, dot plots, histograms and box plots (review from 6 <sup>th</sup> grade)
39	A: 5/5 B: 5/6	11.1/11.2	Analyzing Data Displays/ Comparing Data Sets	SP.2	STEM (one per semester)
40	A: 5/7 B: 5/8	11.3/11.4	Interpreting the Shapes of Data Displays Standard Deviation	SP.3	
41	A: 5/9 B: 5/12	11.5	Two-Way Frequency Tables	SP. 5	3 ACT Math Task (one per unit)

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<b>42</b>	A: 5/13 B: 5/14	<b>Topic 11 Test (Statistics)</b>	
<b>43</b>	A: 5/15 B: 5/16	Final Review	
<b>44</b>	A: 5/19 B: 5/21	Final Review	
<b>45</b>	A: 5/22 B: 5/23	<b>FINALS</b>	
<b>46</b>	A: 5/27 B: 5/28	<b>FINALS</b>	

\***Bold Section Number** – enduring skill to be reinforced throughout the course  
**BENCHMARK STANDARDS ASSESSMENT (April)**

Quizzes are at teacher discretion, some schools are giving lesson quizzes instead of unit quizzes

FAL (Formative Assessment Lesson) – 1 per semester

STEM Project – 1 per semester

3 ACT Math Task – 1 per unit

(+) Solving Quadratics by Completing the Square is ONLY taught in Middle School