Essential Standards Document

Collaborative Team: College Algebra
Unit #: Unit 1
Essential Standard (# and full standard):

What is the Learning Target or Essential Question? *In student/parent-friendly terms (i.e. "I can…"). There should be multiple targets from 1 standard. There could just be 1 essential question.*	What Level of Thinking Does it Involve? *Depth of Knowledge (DOK 1-4)*	How will you formatively assess this learning target or response to your essential question? *Provide or link to a **specific** formative assessment that shows how you're evaluating students' specific knowledge or skills.*
I can complete the square	DOK 3	*Solve by completeing the square* $$3x^2 - 12x + 6 = 0$$
I can solve absolute value inequalities	DOK 3	Solve each inequality and graph the solution set. a. $\|x - 5\| > 2$ b. $8 - \|2x + 1\| \geq 6$

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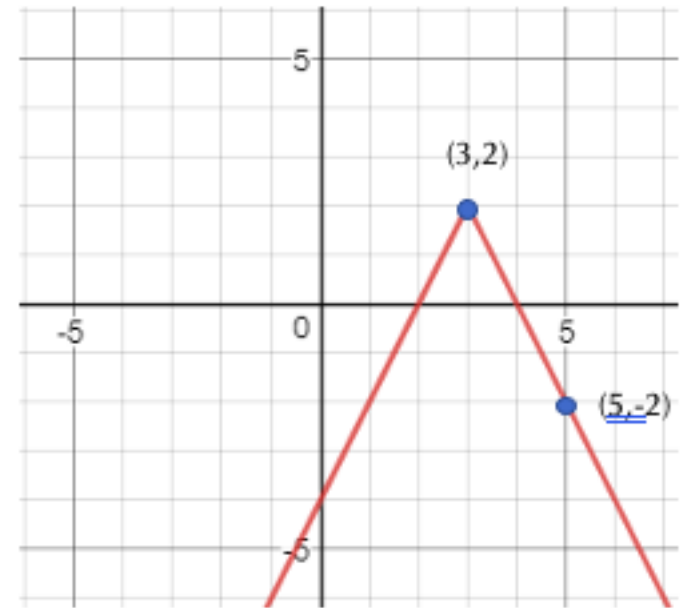**Unit #: Unit 2**
Essential Standard (# and full standard):

What is the Learning Target or Essential Question? *In student/parent-friendly terms (i.e. "I can…"). There should be multiple targets from 1 standard. There could just be 1 essential question.*	What Level of Thinking Does it Involve? *Depth of Knowledge (DOK 1-4)*	How will you formatively assess this learning target or response to your essential question? *Provide or link to a specific formative assessment that shows how you're evaluating students' specific knowledge or skills.*
I can find zeros of a function	DOK 4	Find the zeros of the function a) $f(x) = 4x^2 + 19x - 5$ b) $f(x) = \sqrt{3x^2 - 9x}$ c) $f(x) = \sqrt{3x - 14} - 8$ d) $f(x) = \dfrac{7x^2 - 14}{3x + 1}$
I can identify transformations for graphs	DOK 1	$y = 4x^2 - 5$ b. $y = \dfrac{1}{3}\sqrt{-x} + 4$ c. $y = -|x - 5| + 2$ d. $y = \dfrac{1}{2}(x - 2)^3$ e. $-2f(x + 2)$ f. $f(x - 4) + 2$

I can write an equation for a function given a graph	DOK 4	Write the equation of the graph below
		(3,2) (5,-2)

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Unit #: Unit 3
Essential Standard (# and full standard):

What is the Learning Target or Essential Question? *In student/parent-friendly terms (i.e. "I can…"). There should be multiple targets from 1 standard. There could just be 1 essential question.*	What Level of Thinking Does it Involve? *Depth of Knowledge (DOK 1-4)*	How will you formatively assess this learning target or response to your essential question? *Provide or link to a **specific** formative assessment that shows how you're evaluating students' specific knowledge or skills.*
I can find the vertex of a quadradic function	DOK 3	Find the vertex of the parabola defined by f(x) = 3x^2 – 12x + 16
I can determine the horizontal and slant asymptotes of a rational function	DOK 2	Determine and state the equation of the horizontal asymptotes. a. $f(x) = \frac{x+4}{x^2-3}$ b. $f(x) = \frac{3x^2-2}{5x^2+1}$ c. $f(x) = \frac{2x^3+4x+1}{x^4-3x}$ d. $f(x) = \frac{2x+7}{x-1}$
I can non-linear inequalities	DOK 4	Solve each inequality a. $x^2 - 5x + 6 \le 0$ b. $\frac{x+2}{x-5} \ge 0$

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Unit #: Unit 4
Essential Standard (# and full standard):

What is the Learning Target or Essential Question? *In student/parent-friendly terms (i.e. "I can..."). There should be multiple targets from 1 standard. There could just be 1 essential question.*	What Level of Thinking Does it Involve? *Depth of Knowledge (DOK 1-4)*	How will you formatively assess this learning target or response to your essential question? *Provide or link to a **specific** formative assessment that shows how you're evaluating students' specific knowledge or skills.*
I can determine the domain and range of log and exponential functions	DOK 2	Determine the domain and range a. $f(x) = \ln(x+3)$. b. $f(x) = log_2(4x - 5) - 2$ $f(x) = 2^x - 3$
I can solve exponential and logarithmic equation	DOK 4	Solve a. $3^{x+3} = 9^{2x+5}$ b. $\log_3 x + \log_3(x - 8) = 2$ c. $\ln(13x + 3) - \ln(x^2 - 2) = \ln 2$ $6^{3x} + 10 = 47$
I can find the inverse of a function	DOK 3	Find the inverse a. $g(x) = \frac{2}{x-3}$ b. $p(x) = \sqrt[4]{x - 3}$ c. $f(x) = \ln(x + 1) - 3$ d. $h(x) = 5^{x+2} + 10$

Collaborative Team: College Algebra
Unit #: Unit 5
Essential Standard (# and full standard):

What is the Learning Target or Essential Question? *In student/parent-friendly terms (i.e. "I can..."). There should be multiple targets from 1 standard. There could just be 1 essential question.*	What Level of Thinking Does it Involve? *Depth of Knowledge (DOK 1-4)*	How will you formatively assess this learning target or response to your essential question? *Provide or link to a **specific** formative assessment that shows how you're evaluating students' specific knowledge or skills.*
I can solve systems using matrices	DOK 2	Solve a. $$\begin{cases} \dfrac{2}{3}x + \dfrac{1}{6}y = \dfrac{2}{3} \\ 4x + y = 4 \end{cases}$$ b. $$\begin{cases} -5x - 5z = 0 \\ 5x - y + 6z = -24 \\ 5x + 6y - z = -11 \end{cases}$$

		c.
		$$\begin{cases} 4y - z = 7 \\ x - 2y + z = -3 \\ -2x - 4y + z = 0 \end{cases}$$
		d.
		$\begin{cases} x - 3y + 2z = 18 \\ 5x - 13y + 12z = 80 \end{cases}$
I can graph systems of inequalities	DOK 4	Sketch the graph of $\begin{cases} -3x + 2y < 6 \\ -2x - y < 3 \\ y > -3 \end{cases}$ Stretch the graph of $\begin{cases} -2 < x < 1 \\ y \le x^2 + 1 \end{cases}$.