

Innovation Academy

Curriculum Night Mr. Abdulahi

Advanced Algebra C&C
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About me!

- Originally from Ethiopia
- Four kids, 2 attending IA
- 13th year teaching – background in ES, MS, and HS
- Background as HS Math teacher, SST Chair and Math Interventionist
- Outside the classroom, enjoy spending time with family – Camping, Hiking



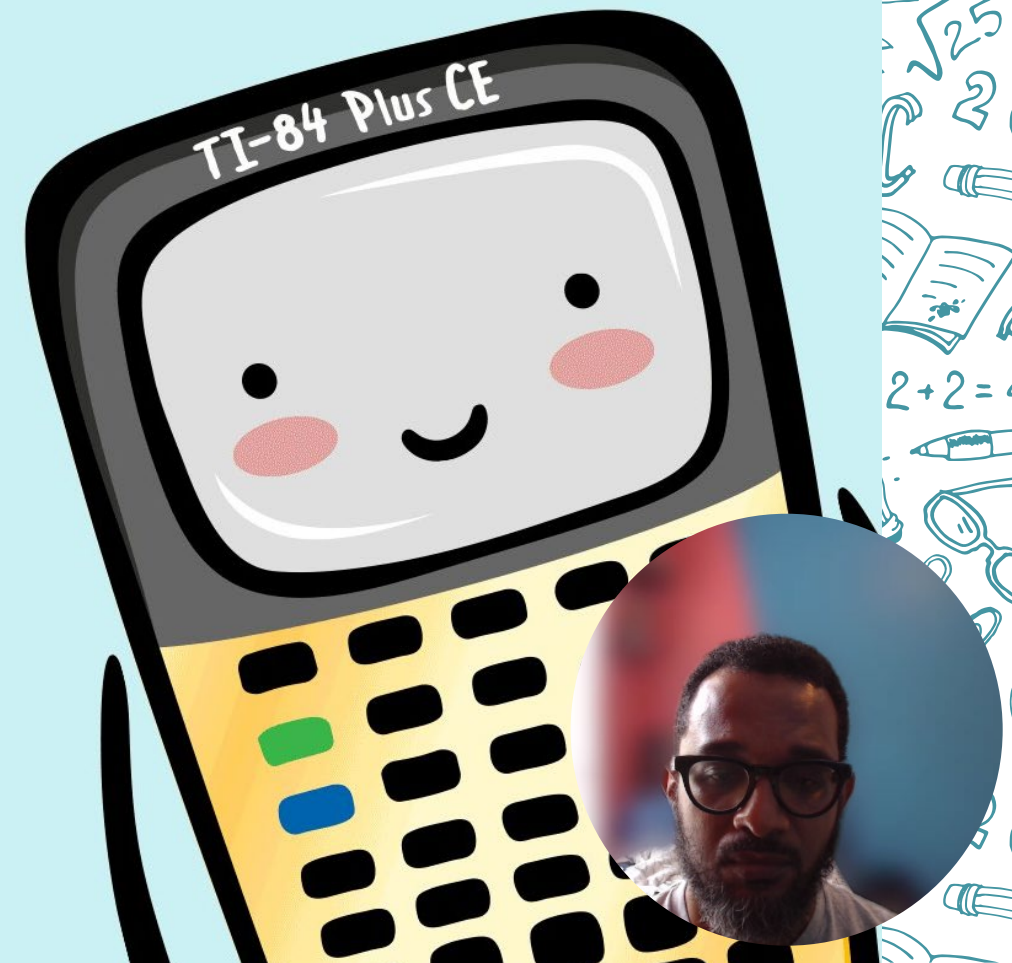
What is Advanced Algebra?

- First Semester
 - Investigating Algebra and Matrices (Unit 1)
 - Modeling Polynomial Functions (Unit 2)
 - Exploring Rational Functions (Unit 3)
 - Investigating Radical Functions (Unit 4)
- Second Semester
 - Modeling Exponential and Logarithmic Functions (Unit 5)
 - Exploring Trigonometry and the Unit Circle (Unit 6)
 - Investigating Descriptive and Inferential Statistics (Unit 7)
 - Preview of AP Precalculus (Unit 8)



- Major Assessments (Tests) - 55%
 - Students who score below a 75 on major assessments should plan to take the recovery test.
- Minor Assessments (Quizzes) - 35%
 - Students will have the opportunity to recover a minor below a 75 by performing better on the major for that unit.
- Practice (HW) - 10%
 - Graded based on completion.
 - Daily check of homework

Grading



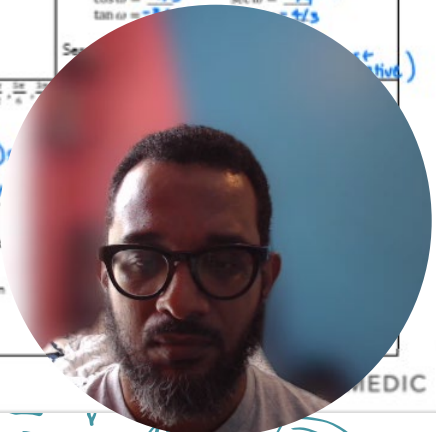
Expectations

- Have prerequisite skills
- Actively participate in class
- Do the work (practice is necessary for success!)
- Ask questions
- A graphing calculator is required for this course; one can be checked out by your student in the eXchange to use for the school year.
- Think critically
- Have fun 😊

Circuit Training Unit 7 Review Name: Key

Directions: Begin in cell #1. Show the work necessary to arrive at your answer. Search for your answer in one of the other cells and mark that cell #2, then work out the new problem. Proceed in this manner until you complete the circuit and arrive back at the first box. You do not need a calculator to complete this circuit.

# <u>1</u> Consider the function $f(\theta) = \tan\left(\frac{\pi}{4}\theta\right)$. What is $f\left(\frac{3\pi}{4}\right)$? $f\left(\frac{3\pi}{4}\right) = \tan\left(\frac{3\pi}{4}\right) = -1$	# <u>4</u> What is the period of $y = \tan\left(\frac{\pi}{4}x\right)$? $\frac{\pi}{(\pi/4)} = 4$
# <u>13</u> Find all zeros of the function $g(x) = 4\cos^2 x - 3$ on the interval $[0, 2\pi]$. $\cos^2 x = \frac{3}{4}$ $\cos x = \pm \frac{\sqrt{3}}{2}$ $x = \frac{\pi}{6}, \frac{5\pi}{6}, \frac{7\pi}{6}, \frac{11\pi}{6}$	# <u>2</u> The tangent function is always _____ on its domain. ① increasing ② decreasing ③ concave up ④ concave down
# <u>15</u> Ken's distance above the ground (in inches) after t minutes on Barbie's Ferris wheel is given by $h(t) = 3\cos(\pi t) + 4$. What is Ken's maximum height? $4 + 3 = 7$	# <u>17</u> Given $\csc \omega = \frac{5}{3}$ and $\frac{\pi}{2} \leq \omega \leq \pi$. Find $\sin \omega = \frac{3}{5}$ $\cos \omega = -\frac{4}{5}$ $\tan \omega = -\frac{3}{4}$ Sec $\omega = \frac{5}{3}$
# <u>20</u> Find an exact value for $\cos \frac{\pi}{12}$. $\cos\left(\frac{\pi}{3} - \frac{\pi}{4}\right) = \cos\left(\frac{\pi}{3}\right)\cos\left(\frac{\pi}{4}\right) + \sin\left(\frac{\pi}{3}\right)\sin\left(\frac{\pi}{4}\right)$ $= \frac{1}{2} \cdot \frac{\sqrt{2}}{2} + \frac{\sqrt{3}}{2} \cdot \frac{\sqrt{2}}{2} = \frac{\sqrt{2}}{4} + \frac{\sqrt{6}}{4} = \frac{\sqrt{2} + \sqrt{6}}{4}$	# <u>3</u> At the x -values where $f(x) = \cos x$ has a relative maximum, $g(x) = \sec x$ has a 1. Vertical asymptote 2. Relative maximum 3. Relative minimum 4. X-intercept



Support



- Help Sessions Before School
 - I am available most mornings after 8:15 am till the beginning of 1st period, including quiz and test days.
- Flex Fridays
 - Students should select tutoring on the Flex Friday form
 - 8:55 am – 9:25 am
 - 9:30 am – 10:00 am
- Other resources?
 - Textbook (online)
 - Phoenix Academic Center during 4th & 5th Lunch
(Tutoring available for all subjects now)



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Thank you!
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Advanced Algebra: Honors
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