

# Math ACTION PLAN

## Action Plan-A

Objective: By the year 2024, students will demonstrate improved academic performance in Mathematics as measured by:

Strategy A : A **5%** increase in the PSAT Mathematics score of all 11th grade students

Baseline: PSAT 2016 **466**

Action Step	Person(s)/Group(s) Responsible	Timeline for Completion	Resources Needed	Indicators of Success	Status
1. Improve mathematical literacy through the effective use of the TI-84 calculator.	Assistant Principal for Academic Affairs, Department Chair, Math Faculty	Sept. 2017	TI-84 Calculator; Professional development; TI Webinars; Khan Academy	Improved scores	Completed
2. Improve mathematical literacy through the effective use of graphs, diagrams, and illustrations.	Assistant Principal for Academic Affairs, Department Chair, Math Faculty	Sept. 2017	Textbooks; Kuta Software; PSAT Prep Books; Khan Academy; Penn Literacy strategies	Improved scores	Completed
3. Improve mathematical literacy through the effective use of critical reading and vocabulary strategies	Assistant Principal for Academic Affairs, Department Chair, Math Faculty	Sept. 2020	Textbooks; Kuta Software; PSAT Prep Books; Khan Academy; Penn Literacy strategies	Improved scores	
4. Develop systematic plan for Khan Academy use through math classes	Assistant Principal for Academic Affairs,, Department Chair, Math Faculty	Sept. 2018	Online Connectivity Khan Academy	Improved scores	
5. Implement systematic plan for use of Khan Academy in math classes	Assistant Principal for Academic Affairs,, Department Chair, Math Faculty	Sept. 2019	Online Connectivity Khan Academy	Improved scores	

6. Develop systematic plan for using PSAT/SAT materials in math classes	Assistant Principal for Academic Affairs,, Department Chair, Math Faculty	Sept. 2017	PSAT Prep Books; College Board website; Teacher Created Assessments; TI-84 Calculator	Improved scores	Completed
7. Implement plan for using PSAT/SAT materials in math classes	Assistant Principal for Academic Affairs,, Department Chair, Math Faculty	Sept. 2017	PSAT Prep Books; College Board website; Teacher Created Assessments; TI-84 Calculator	Improved scores	Completed
8. Increase participation in math extracurricular clubs.	Assistant Principal for Academic Affairs, Assistant Principal for Student Affairs, Department Chair, Math Faculty	Sept. 2018	Tutoring, Mathletes, Future Engineers Club, American Mathematics Competition, Math Madness	Increased membership in clubs	
9. Share best practices among math teachers	Principal, Assistant Principal for Academic Affairs, Department Chair, Math Teachers	Sept. 2017	Time during department meetings to share best practices.	Plan is in place and teachers are consistently sharing best practices.	Completed
10. Continue to use Marzano monitoring strategies for student learning	Assistant Principal for Academic Affairs, Department Chair, Math Teachers	Sept. 2017	Distribute to teachers summary of Marzano monitoring best practices	Improved scores	Completed
11. Develop a plan for training teachers in differentiation	Principal, Assistant Principal of Academic Affairs, Academic Board	Sept. 2019	Plan for teacher training	Improved scores	

## Math Action Plan-B

Objective: By the year 2024, students will demonstrate improved academic performance in Mathematics as measured by:

Strategy B : An increase in the number of 11th grade students identified through AP Potential.

Baseline: AP Potential 2016

1. AP Calculus 6 (current #): **100%**
2. AP Statistics 6: **75%**

Action Step	Person(s)/Group(s) Responsible	Timeline for Completion	Resources Needed	Indicators of Success	Status
1. Improve mathematical literacy through the effective use of the TI-84 calculator.	Assistant Principal for Academic Affairs,, Department Chair, Math Faculty	Sept. 2017	TI-84 Calculator; Professional development; TI Webinars; Khan Academy; College Board Website	Improved scores	Completed
2. Improve mathematical literacy through the effective use of graphs, diagrams, and illustrations.	Assistant Principal for Academic Affairs,, Department Chair, Math Faculty	Sept. 2017	<b>Textbooks</b> ; Kuta Software; PSAT Prep Books; Khan Academy; College Board Website; Penn Literacy strategies	Improved scores	Completed
3. Improve mathematical literacy through the effective use of critical reading and vocabulary strategies	Assistant Principal for Academic Affairs,, Department Chair, Math Faculty	Sept. 2020	<b>Textbooks</b> ; Kuta Software; PSAT Prep Books; Khan Academy; College Board Website; Penn Literacy strategies	Improved scores	
4. Develop systematic plan for Khan Academy use in math classes	Assistant Principal for Academic Affairs, <b>Department Chair, Math Faculty</b>	Sept. 2018	<b>Online Connectivity Khan Academy</b>	<b>Improved scores</b>	
5. Implement systematic plan for Khan Academy use in math classes	Assistant Principal for Academic Affairs,, <b>Department Chair, Math Faculty</b>	Sept. 2019	<b>Online Connectivity Khan Academy</b>	<b>Improved scores</b>	
6. Increase the number of in-class advanced level	Department Chair and Math Teachers	Sept. 2017	PSAT Prep Books; College Board website; Teacher Created	<b>Improved scores</b>	<b>Completed</b>

problems.			Assessments; TI-84 Calculator; Supplements		
7. Increase participation in math extracurricular clubs.	Assistant Principal for Academic Affairs, Assistant Principal for Student Affairs, Department Chair, Math Faculty	Sept. 2018	Tutoring, Mathletes, Future Engineers Club, American Mathematics Competition, Math Madness	Increased membership in clubs	
8. Continue to Identify high-achieving math students for AP program	Assistant Principal for Academic Affairs,, Department Chair, Math Teachers	Sept. 2017	Encouragement by teachers to consider AP	Teacher Recommendation	Completed
9. Share best practices among math teachers	Assistant Principal for Academic Affairs, Department Chair, Math Teachers	Sept. 2017	Time during department meetings to share best practices.	Improved scores	Completed
10. Continue to use Marzano monitoring strategies for student learning	Proposed change: Principal, Assistant Principal for Academic Affairs, Department Chair, Math Teachers	Sept. 2017	Summary of Marzano strategies for monitoring	Individual teachers using strategies  Improved scores	Completed
11. Develop a plan for training teachers in differentiation	Principal, Assistant Principal of Academic Affairs, Academic Board	Sept. 2019	Plan for teacher training	Improved scores	

## Math Action Plan-C

Objective: By the year 2024, students will demonstrate improved academic performance in Mathematics as measured by:

Strategy C : A 5% increase in the number of 11th grade students meeting the annual target for Mathematics in the Performance Series.

Baseline: Performance Series 2015-16: **45%** met annual target

Action Step	Person(s)/Group(s) Responsible	Timeline for Completion	Resources Needed	Indicators of Success	Status
1. Improve mathematical literacy through the effective use of the TI-84 calculator.	Assistant Principal for Academic Affairs,, Department Chair, Math Faculty	Sept. 2017	TI-84 Calculator; Professional development; TI Webinars; Khan Academy	Improved scores	Completed
2. Improve mathematical literacy through the effective use of graphs, diagrams, and illustrations.	Assistant Principal for Academic Affairs,, Department Chair, Math Faculty	Sept. 2017	Books; Kuta Software; Khan Academy; Penn Literacy strategies	Improved scores	Completed
3. Increase in-class Performance Series practice.	Assistant Principal for Academic Affairs,, Department Chair, Math Faculty	Sept. 2020	Khan Academy; Teacher Created Assessments; TI-84 Calculator	Improved scores	
4. Increase participation in math extracurricular clubs.	Assistant Principal for Academic Affairs, Assistant Principal for Student Affairs, Department Chair, Math Faculty	Sept. 2018	Tutoring, Mathletes, Future Engineers Club, American Mathematics Competition, Math Madness	Increased membership in clubs	
5. Continue to identify at-risk students for math through the use of online student at risk recommendation form	Assistant Principal for Academic Affairs,, Department Chair, Math Faculty	Sept. 2017	Guidance; Online Student At- Risk Form; OAA; Teachers; Parents; Previous Performance Series Scores	Students identified; Tutoring; Communication between parents, Principal for Academic Affairs and/or teachers.	Completed

6. Proposed change: Share best practices among math teachers	Assistant Principal for Academic Affairs, Department Chair, Math Teachers	Sept. 2017	Time during department meetings to share best practices.	Improved scores	Completed
7. Continue to use Marzano monitoring strategies for student learning	Assistant Principal for Academic Affairs, Department Chair, Math Teachers	Sept. 2017	Summary of Marzano monitoring best practices	Improved scores	Completed
8. Develop a plan for training teachers in differentiation	Principal, Assistant Principal of Academic Affairs, Academic Board	Sept. 2019	Plan for teacher training	Improved scores	

## Math Action Plan-D

Objective: By the year 2024, students will demonstrate improved academic performance in Mathematics as measured by:

Strategy D : A **5%** increase in the PSAT Math score of all 10th grade students

Baseline: PSAT 2016: **445**

Action Step	Person(s)/Group(s) Responsible	Timeline for Completion	Resources Needed	Indicators of Success	Status
1. Improve mathematical literacy through the effective use of the TI-84 calculator.	Assistant Principal for Academic Affairs,, Department Chair, Math Faculty	Sept. 2017	TI-84 Calculator; Professional development; TI Webinars; Khan Academy	Improved scores	Completed
2. Improve mathematical literacy through the effective use of graphs, diagrams, and illustrations.	Assistant Principal for Academic Affairs,, Department Chair, Math Faculty	Sept. 2017	Textbooks; Kuta Software; PSAT Prep Books; Khan Academy; Penn Literacy strategies	Improved scores	Completed
3. Improve mathematical literacy through the effective use of critical reading	Assistant Principal for Academic Affairs,, Department Chair, Math Faculty	Sept. 2020	Textbooks; Kuta Software; PSAT Prep Books; Khan Academy; Penn Literacy strategies	Improved scores	

and vocabulary strategies					
4. Develop systematic plan for Khan Academy use through math classes	Assistant Principal for Academic Affairs,, Department Chair, Math Faculty	Sept. 2018	Online Connectivity Khan Academy	Improved scores	
5. Implement systematic plan for Khan Academy use through math classes	Assistant Principal for Academic Affairs,, Department Chair, Math Faculty	Sept. 2019	Online Connectivity Khan Academy	Improved scores	
6. Develop systematic plan for using PSAT/SAT materials in math classes	Assistant Principal for Academic Affairs,, Department Chair, Math Faculty	Sept. 2017	PSAT Prep Books; College Board website; Teacher Created Assessments; TI-84 Calculator	Improved scores	Completed
7. Implement plan for using PSAT/SAT materials in math classes	Assistant Principal for Academic Affairs,, Department Chair, Math Faculty	Sept. 2017	PSAT Prep Books; College Board website; Teacher Created Assessments; TI-84 Calculator	Improved scores	Completed
8. Increase participation in math extracurricular clubs.	Assistant Principal for Academic Affairs, add APSA Department Chair, Math Faculty	Sept. 2018	Tutoring, Mathletes, Future Engineers Club, American Mathematics Competition, Math Madness	Increased membership in clubs	
9. Continue to identify at-risk students in math	Principal, Assistant Principal for Academic Affairs, Department Chair, Math Faculty	Sept. 2017	Guidance; Online Student At Risk Form; OAA; Teachers; Parents; September Performance Series Scores	Students Identified; Tutoring; Communication between parents, APAA, and/or teachers.	Completed
10. Share best practices among math teachers	Principal Assistant Principal for Academic Affairs, Department Chair, Math Teachers	Sept. 2017	Time during department meetings to share best practices.	Improved scores	Completed

11. Continue to use Marzano monitoring strategies for student learning	APAA, Department Chair, Math Teachers	Sept. 2017	Summary of Marzano monitoring best practices	Improved scores	Completed
12. Develop a plan for training teachers in differentiation	Principal, Assistant Principal of Academic Affairs, Academic Board	Sept. 2019	Plan for teacher training	Improved scores	

## Math Action Plan-E

Objective: By the year 2024, students will demonstrate improved academic performance in Mathematics as measured by:

Strategy E : An increase in the number of 10th grade students identified through AP Potential.

Baseline: AP Potential 2016

1. AP Calculus 6 (current #): **100%**
2. AP Statistics 8:: **100%**

Action Step	Person(s)/Group(s) Responsible	Timeline for Completion	Resources Needed	Indicators of Success	Status
1. Improve mathematical literacy through the effective use of the TI-84 calculator.	Assistant Principal for Academic Affairs, Department Chair, Math Faculty	Sept. 2017	TI-84 Calculator; Professional development; TI Webinars; Khan Academy; College Board Website	Improved scores	Completed
2. Improve mathematical literacy through the effective use of graphs, diagrams, and illustrations.	Assistant Principal for Academic Affairs, Department Chair, Math Faculty	Sept. 2017	Textbooks: Kuta Software; PSAT Prep Books; Khan Academy; College Board Website; Penn Literacy strategies	Improved scores	Completed



3. Improve mathematical literacy through the effective use of critical reading and vocabulary strategies	Assistant Principal for Academic Affairs, Department Chair, Math Faculty	Sept. 2020	Textbooks; Kuta Software; PSAT Prep Books; Khan Academy; College Board Website; Penn Literacy strategies	Improved scores	
4. Develop systematic plan for Khan Academy use in math classes	Assistant Principal for Academic Affairs,, Department Chair, Math Faculty	Sept. 2018	Online Connectivity Khan Academy	Improved scores	
5. Implement systematic plan for Khan Academy use in math classes	Assistant Principal for Academic Affairs,, Department Chair, Math Faculty	Sept. 2019	Online Connectivity Khan Academy	Improved scores	
6. Increase the number of in-class advanced level problems.	Department Chair and Math Teachers	Sept. 2017	PSAT Prep Books; College Board website; Teacher Created Assessments; TI-84 Calculator; Supplements	Improved scores	
7. Increase participation in math extracurricular clubs.	Assistant Principal for Academic Affairs, Assistant Principal For Student Affairs, Department Chair, Math Faculty	Sept. 2018	Tutoring, Mathletes, Future Engineers Club, American Mathematics Competition, Math Madness	Increased membership in clubs	
8. Continue to identify high-achieving math students for AP program	Department Chair, Math Teachers, and APAA	Sept. 2017	Encouragement by teachers to consider AP	Teacher Recommendation	Completed
9. Share best practices among math teachers	Principal, Assistant Principal for Academic Affairs, Department Chair, Math Teachers	Sept. 2017	Time during department meetings to share best practices.	Improved scores	Completed

8. Continue to use Marzano monitoring strategies for student learning	Assistant Principal for Academic Affairs, Department Chair, Math Teachers	Sept. 2017	Distribute to teachers summary of Marzano monitoring best practices	Improved scores	Completed
10. Develop a plan for training teachers in differentiation	Principal, Assistant Principal of Academic Affairs, Academic Board	Sept. 2019	Plan for teacher training	Improved scores	

## Math Action Plan-F

Objective: By the year 2024, students will demonstrate improved academic performance in Mathematics as measured by:

Strategy F : A **5%** increase in the number of 10th grade students meeting the annual target for Mathematics in the Performance Series  
 Baseline: Performance Series 2015-16: **36%** met annual target

Action Step	Person(s)/Group(s) Responsible	Timeline for Completion	Resources Needed	Indicators of Success	Status
1. Improve mathematical literacy through the effective use of the TI-84 calculator.	Assistant Principal for Academic Affairs, Department Chair, Math Faculty	Sept. 2017	TI-84 Calculator; Professional development; TI Webinars; Khan Academy	Improved scores	Complete
2. Improve mathematical literacy through the effective use of graphs, diagrams, and illustrations.	Assistant Principal for Academic Affairs, Department Chair, Math Faculty	Sept. 2017	Textbooks; Kuta Software; Khan Academy; Penn Literacy strategies	Improved scores	Completed
3. Improve mathematical literacy through the effective use of critical reading and vocabulary strategies	Assistant Principal for Academic Affairs, Department Chair, Math Faculty	Sept. 2020	Textbooks; Kuta Software; Khan Academy; Penn Literacy strategies	Improved scores	

4. Develop systematic plan for Khan Academy use in math classes	Assistant Principal for Academic Affairs, Department Chair, Math Faculty	Sept. 2018	Online Connectivity Khan Academy	Improved scores	
5. Implement systematic plan for Khan Academy use in math classes	Assistant Principal for Academic Affairs, Department Chair, Math Faculty	Sept. 2019	Online Connectivity Khan Academy	Improved scores	
6. Increase in-class Performance Series practice.	Assistant Principal for Academic Affairs, Department Chair, Math Faculty	Sept. 2020	Khan Academy; Teacher Created Assessments; TI-84 Calculator	Improved scores	
7. Increase participation in math extracurricular clubs.	Assistant Principal for Academic Affairs, Assistant Principal for Student Affairs, Department Chair, Math Faculty	Sept. 2018	Tutoring, Mathletes, Future Engineers Club, American Mathematics Competition, Math Madness	Increased membership in clubs	
8. Continue to identify at-risk students for math through the use of online student at risk recommendation form	Assistant Principal for Academic Affairs, Department Chair, Math Faculty	Sept. 2017	Guidance; Online Student At Risk Form;  OAA; Teachers; Parents; Previous Performance Series Scores	Students identified; Tutoring; Communication between parents, Assistant Principal for Academic Affairs, and/or teachers.	Completed
9. Share best practices among math teachers	Principal, Assistant Principal for Academic Affairs, Department Chair, Math Teachers	Sept. 2017	Time during department meetings to share best practices.	Improved scores	Completed
10. Continue to use Marzano monitoring strategies for student learning	Assistant Principal for Academic Affairs, Department Chair, Math Teachers	Sept. 2017	Summary of Marzano monitoring best practices	Improved scores	Completed

11. Develop a plan for training teachers in differentiation	Principal, Assistant Principal of Academic Affairs, Academic Board	Sept. 2019	Plan for teacher training	Improved scores	
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## Math Action Plan-G

Objective: By the year 2024, students will demonstrate improved academic performance in Mathematics as measured by:

Strategy G : A **5%** increase in the number of 9th grade students meeting the annual target for Mathematics in the Performance Series.  
 Baseline: Performance Series 2015-16: **27%** met annual target

Action Step	Person(s)/Group(s) Responsible	Timeline for Completion	Resources Needed	Indicators of Success	Status
1. Improve mathematical literacy through the effective use of the TI-84 calculator.	Assistant Principal for Academic Affairs, Department Chair, Math Faculty	Sept. 2017	TI-84 Calculator; Professional development; TI Webinars; Khan Academy	Improved scores	Completed
2. Improve mathematical literacy through the effective use of graphs, diagrams, and illustrations.	Assistant Principal for Academic Affairs,, Department Chair, Math Faculty	Sept. 2017	Textbooks: Kuta Software; Khan Academy; Penn Literacy strategies	Improved scores	Completed
3. Increase in-class Performance Series practice.	Assistant Principal for Academic Affairs, Department Chair, Math Faculty	Sept. 2020	Khan Academy; Teacher Created Assessments; TI-84 Calculator	Improved scores	
4. Increase participation in math extracurricular clubs.	Assistant Principal for Academic Affairs, Assistant Principal for Student Affairs	Sept. 2018	Tutoring, Mathletes, Future Engineers Club, American Mathematics Competition, Math	Increased membership in clubs	

	Department Chair, Math Faculty		Madness		
5. Continue to identify at-risk students for math through the use of online student at risk recommendation form	Assistant Principal for Academic Affairs, Department Chair, Math Faculty	Sept. 2017	Guidance; Online Student At Risk form; OAA; Teachers; Parents; September Performance Series Scores; Entrance Examination	Students identified; Tutoring; Communication between parents, APAA, and/or teachers.	Completed
6. Share best practices among math teachers	Principal, Assistant Principal for Academic Affairs, Department Chair, Math Teachers	Sept. 2017	Time during department meetings to share best practices.	Plan is in place and teachers are consistently sharing best practices.	Completed
7. Continue to use Marzano monitoring strategies for student learning	Assistant Principal for Academic Affairs, Department Chair, Math Teachers	Sept. 2017	Distribute to teachers summary of Marzano monitoring best practices	Improved scores	Completed
8. Develop a plan for training teachers in differentiation	Principal, Assistant Principal of Academic Affairs, Academic Board	Sept. 2019	Plan for teacher training	Improved scores	