

RUBRIC FOR PERFORMANCE TASK #1 — SUNRISE, SUNSET

Scores and Criteria				
Assessment Category	• Passable level of achievement – below provincial standard LEVEL 1	• Moderate level of achievement – below, but approaching provincial standard LEVEL 2	• High level of achievement – at provincial standard LEVEL 3	• Very high to outstanding level of achievement – above provincial standard LEVEL 4
	Thinking/Inquiry/Problem Solving			
	• Data, algebraic, and graphical models are weakly connected and address few aspects of the situation. • Reasoning is evident but inconsistent.	• Data, algebraic, and graphical models make some connections and address some aspects of the situation. • Reasoning is evident and logical in parts of the problem.	• Data, algebraic, and graphical models are well connected and address most aspects of the situation. • Reasoning is logical and consistent within context.	• Data, algebraic, and graphical models are well connected and integrate all aspects of the situation. • Reasoning is logical, consistent, and relates to the broader context.
	Communication			
	• Student gathers limited but accurate information from charts or graphs. • Either mathematical or narrative form is present, but not both. • Explanations and justifications are unclear.	• Student gathers some information from charts or graphs but has difficulty interpreting it. • Both mathematical and narrative forms are present, but the forms are not integrated. • Explanations and justifications are understandable but unclear.	• Student gathers sufficient information from charts or graphs and interprets it correctly. • Mathematical and narrative forms are present and integrated. • Explanations and justifications are clear.	• Student gathers complex information from charts or graphs and interprets it fully. • Various mathematical forms and narrative are present, integrated, and well chosen. • Explanations and justifications are clear and thorough.
	Application			
	• Selected equation is only partially appropriate to the data. • Selected model is used with some inaccuracies.	• Selected equation is generally appropriate to the data. • Selected model is used but may contain minor errors.	• Selected equation is appropriate and relates to the data. • Selected model is used correctly.	• Selected equation is appropriate, efficient, and relates to the data. • Selected model is used correctly and is verified or supported.

RUBRIC FOR PERFORMANCE TASK #2 — AMUSEMENT RIDES

Scores and Criteria				
Assessment Category	Passable level of achievement – below provincial standard LEVEL 1	Moderate level of achievement – below, but approaching provincial standard LEVEL 2	High level of achievement – at provincial standard LEVEL 3	Very high to outstanding level of achievement – above provincial standard LEVEL 4
	Thinking/Inquiry/Problem Solving			
	- Data, algebraic, and graphical models are weakly connected and address few aspects of the situation. - Reasoning is evident but inconsistent.	- Data, algebraic, and graphical models make some connections and address some aspects of the situation. - Reasoning is evident and logical in parts of the problem.	- Data, algebraic, and graphical models are well connected and address most aspects of the situation. - Reasoning is logical and consistent within context.	- Data, algebraic, and graphical models are well connected and integrate all aspects of the situation. - Reasoning is logical, consistent, and relates to the broader context.
	Communication			
	- Student gathers limited but accurate information from charts or graphs. - Either mathematical or narrative form is present, but not both. - Explanations and justifications are unclear.	- Student gathers some information from charts or graphs but has difficulty interpreting it. - Both mathematical and narrative forms are present, but the forms are not integrated. - Explanations and justifications are understandable but lack clarity.	- Student gathers sufficient information from charts or graphs and interprets it correctly. - Mathematical and narrative forms are present and integrated. - Explanations and justifications are clear.	- Student gathers complex information from charts or graphs and interprets it fully. - Various mathematical forms and narrative are present, integrated, and well chosen. - Explanations and justifications are clear and thorough.
	Application			
	- Selected equation is only partially appropriate to the data. - Selected model is used with some inaccuracies.	- Selected equation is generally appropriate to the data. - Selected model is used but may contain minor errors.	- Selected equation is appropriate and relates to the data. - Selected model is used correctly.	- Selected equation is appropriate, efficient, and relates to the data. - Selected model is used correctly and is verified or supported.

RUBRIC FOR PERFORMANCE TASK #3 — LAWN CHAIRS

Scores and Criteria				
Achievement Category	Passable level of achievement – below provincial standard LEVEL 1	Moderate level of achievement – below, but approaching provincial standard LEVEL 2	High level of achievement – at provincial standard LEVEL 3	Very high to outstanding level of achievement – above provincial standard LEVEL 4
	Knowledge/Understanding			
	Student determines the length of BC but makes significant error(s).	Student determines the length of BC with minor errors or omissions.	Student determines the length of BC accurately.	Student determines the length of BC accurately and verifies solution.
	Communication			
	- Few mathematical conventions and forms are used. - Diagram accurately displays a little of the information. - Explanations are unclear.	- Some mathematical conventions and forms are used correctly. - Diagram accurately displays some of the information. - Explanations are understandable but unclear.	- Most mathematical conventions and forms are used correctly. - Diagram is correctly drawn and displays most of the information. - Explanations are clear.	- Consistently uses mathematical conventions and forms correctly. - Diagram accurately displays all of the information. - Explanations are clear and thorough.
	Application			
	Selects and applies few appropriate trigonometric relationships to solve problem.	Selects and applies some appropriate trigonometric relationships to solve problem.	Selects and applies trigonometric relationships to solve problem.	Selects and applies most efficient trigonometric relationships to solve problem.

RUBRIC FOR PERFORMANCE TASK #4 — SOLVING SYSTEMS OF TRIGONOMETRIC EQUATIONS

Scores and Criteria				
Assessment Category	Passable level of achievement – below provincial standard LEVEL 1	Moderate level of achievement – below, but approaching provincial standard LEVEL 2	High level of achievement – at provincial standard LEVEL 3	Very high to outstanding level of achievement – above provincial standard LEVEL 4
	Knowledge/ Understanding			
	Some of system of equations solved algebraically but solution may contain inaccuracies.	Most of system of equations solved algebraically but solution may contain inaccuracies.	Systems of equations solved algebraically; most computations generally correct.	Systems of equations solved algebraically accurately and verified or supported.
	Thinking/Inquiry/Problem Solving			
	- Algebraic and graphical models are weakly connected and address few aspects of the situation. - Reasoning is evident but inconsistent. - Conclusions are somewhat connected with work but are not supported.	- Algebraic and graphical models are connected in a few ways and address some aspects of the situation. - Reasoning is evident and logical in parts of the problem. - Conclusions are consistent with work but are not fully supported.	- Algebraic and graphical models are well connected and address most aspects of the situation. - Reasoning is logical and consistent within context. - Conclusions are supported by evidence and integrate aspects of the problem.	- Algebraic and graphical models are well connected and integrate all aspects of the situation. - Reasoning is logical, consistent, and relates to the broader context. - Conclusions are supported, integrate all aspects of the problem, and are convincing.
	Communication			
	- Few mathematical conventions and forms are used. - Explanations and justifications are unclear.	- Some mathematical conventions and forms are used correctly. - Explanations and justifications are understandable but unclear.	- Most mathematical conventions and forms are used correctly. - Explanations and justifications are clear.	- Student consistently uses mathematical conventions and forms correctly. - Explanations and justifications are clear and thorough.

RUBRIC FOR PERFORMANCE TASK #5 — HOW HIGH IS THE TOWER?

Scores and Criteria				
Assessment Category	Passable level of achievement – below provincial standard LEVEL 1	Moderate level of achievement – below, but approaching provincial standard LEVEL 2	High level of achievement – at provincial standard LEVEL 3	Very high to outstanding level of achievement – above provincial standard LEVEL 4
	Knowledge/ Understanding			
	Student calculates the lengths and the angle but makes significant error(s).	Student calculates the lengths and the angle but makes minor errors and leaves out information.	Student calculates the lengths and the angle accurately.	Student calculates the lengths and the angle accurately and verifies solution.
	Thinking/Inquiry/Problem Solving			
	The model/plan addresses few aspects of the problem. Reasoning is evident but inconsistent.	- The model/plan addresses some aspects of the problem. - Reasoning is evident and logical in parts of the problem.	- Student uses appropriate plan. - Reasoning is logical and consistent within context.	- Student uses appropriate plan that integrates all aspects of the problem. - Reasoning is logical, consistent, and relates to the broader context.
	Communication			
	- Diagram displays little information. - Few mathematical conventions and forms are used. Explanations and justifications are unclear.	- Diagram accurately displays some information. - Some mathematical conventions and forms are used correctly. - Explanations and justifications are understandable but lack clarity.	- Diagram is correctly drawn and displays most information. - Most mathematical conventions and forms are used correctly. - Explanations and justifications are clear.	- Diagram accurately displays all information. - Student consistently uses mathematical conventions and forms correctly. - Explanations and justifications are clear and thorough.
	Application			
	Student selects and applies a few trigonometric relationships to solve problem.	Student selects and applies some trigonometric relationships to solve problem.	Student selects and applies trigonometric relationships to solve problem.	Student selects and applies the most efficient trigonometric relationships to solve problem.

RUBRIC FOR PERFORMANCE TASK #6 — PROVING IDENTITIES

Scores and Criteria				
Assessment Category	Passable level of achievement – below provincial standard LEVEL 1	Moderate level of achievement – below, but approaching provincial standard LEVEL 2	High level of achievement – at provincial standard LEVEL 3	Very high to outstanding level of achievement – above provincial standard LEVEL 4
	Knowledge/ Understanding			
	- Some equations solved algebraically or graphically but these equations may contain inaccuracies. - Attempted solution demonstrates limited understanding of trigonometric identities.	- Most equations solved algebraically or graphically but these equations may contain inaccuracies. - Solution demonstrates some understanding of trigonometric identities.	- Equations solved algebraically or graphically; most computations generally correct. - Solution demonstrates sufficient understanding of trigonometric identities.	- Equations solved algebraically or graphically and accurately. Equations are verified or supported. - Detailed solution demonstrates thorough understanding of trigonometric identities.
	Thinking/Inquiry/Problem Solving			
	- Algebraic and graphical models are weakly connected and address few aspects of the trigonometric statements. - Reasoning is evident but inconsistent. - Conclusions are somewhat connected with work but are not supported.	- Algebraic and graphical models make some connections and address some aspects of the trigonometric statements. - Reasoning is evident and logical in parts of the problem. - Conclusions are consistent with work but are not fully supported.	- Algebraic and graphical models are well connected and address most aspects of the trigonometric statements. - Reasoning is logical and consistent within context. - Conclusions are supported by evidence and integrate aspects of the problem.	- Algebraic and graphical models are well connected and integrate all aspects of the trigonometric statements. - Reasoning is logical, consistent, and relates to the broader context. - Conclusions are supported, integrate all aspects of the problem, and are convincing.
	Communication			
	- Few mathematical conventions and forms are used. - Either mathematical or narrative form is present, but not both. - Explanations and justifications are unclear.	- Some mathematical conventions and forms are used correctly. - Both mathematical and narrative forms are present, but the forms are not integrated. - Explanations and justifications are understandable but unclear.	- Most mathematical conventions and forms are used correctly. - Mathematical and narrative forms are present and integrated. - Explanations and justifications are clear.	- Student consistently uses mathematical conventions and forms correctly. - Various mathematical and narrative forms are present, integrated, and well chosen. - Explanations and justifications are clear and thorough.
Application				
	Selected graphing technology techniques are frequently inappropriate or are used with some inaccuracies.	Selected graphing technology techniques are sometimes inappropriate but may contain minor errors.	Selected graphing technology techniques are appropriate and are used correctly.	Selected graphing technology techniques are appropriate, used correctly, and are verified or supported.

RUBRIC FOR PERFORMANCE TASK #7 —THE TIDE IS HIGH.

Assessment Category	Scores and Criteria			
	Passable level of achievement – below provincial standard LEVEL 1	Moderate level of achievement – below, but approaching provincial standard LEVEL 2	High level of achievement – at provincial standard LEVEL 3	Very high to outstanding level of achievement – above provincial standard LEVEL 4
Thinking/Inquiry/Problem Solving				
	- Data, algebraic, and graphical models are weakly connected and address few aspects of the situation. - Reasoning is evident but inconsistent.	- There are some connections between data, algebraic, and graphical models, and the models address some aspects of the situation. - Reasoning is evident and logical in parts of the problem.	- Data, algebraic, and graphical models are well connected and address most aspects of the situation. - Reasoning is logical and consistent within context.	- Data, algebraic, and graphical models are well connected and integrate all aspects of the situation. - Reasoning is logical, consistent, and relates to the broader context.
	Communication			
Application	- Student gathers limited but accurate information from charts or graphs. - Either mathematical or narrative form is present, but not both. - Explanations and justifications are unclear.	- Student gathers some information from charts or graphs but has difficulty interpreting it. - Both mathematical and narrative forms are present, but the forms are not integrated. - Explanations and justifications are understandable but lack clarity.	- Student gathers sufficient information from charts or graphs and interprets it correctly. - Mathematical and narrative forms are present and integrated. - Explanations and justifications are clear.	- Student gathers complex information from charts or graphs and interprets it fully. - Various mathematical forms and narrative are present, integrated, and well chosen. - Explanations and justifications are clear and thorough.
	Application			
	- Selected equation is only partially appropriate to the data. - Selected model is used with some inaccuracies.	- Selected equation is generally appropriate to the data. - Selected model is used but may contain minor errors.	- Selected equation is appropriate and relates to the data. - Selected model is used correctly.	- Selected tool is appropriate, efficient, and relates to the data. - Selected model is used correctly and is verified or supported.

RUBRIC FOR PERFORMANCE TASK #8 — A TRIGONOMETRIC TRIP

Scores and Criteria				
Assessment Category	Passable level of achievement – below provincial standard LEVEL 1	Moderate level of achievement – below, but approaching provincial standard LEVEL 2	High level of achievement – at provincial standard LEVEL 3	Very high to outstanding level of achievement – above provincial standard LEVEL 4
	Knowledge/ Understanding			
	Student determines angles and distances but makes significant error(s).	Student determines angles and distances with minor errors or omissions.	Student determines angles and distances accurately.	Student determines angles and distances accurately and verifies solution.
	Thinking/Inquiry/Problem Solving			
	- Student attempts parts of the task but there is no evidence of a plan. - Conclusions are somewhat connected with work but are not supported.	- Student uses a plan but it is inappropriate. - Conclusions are consistent with work but are not fully supported.	- Student uses an appropriate plan. - Conclusions are supported by evidence and integrate aspects of the problem.	- Student uses an appropriate plan, and solution integrates all aspects of context. - Conclusions are supported, integrate all aspects of the problem, and are convincing.
	Communication			
	- Diagram accurately displays a little of the information. - Few mathematical conventions are used. - Explanations and justifications are unclear.	- Diagram accurately displays some of the information. - Some mathematical conventions are used correctly. - Explanations and justifications are understandable but unclear.	- Diagram is correctly drawn and displays most of the information. - Most mathematical conventions are used correctly. - Explanations and justifications are clear.	- Diagram accurately displays all of the information. - Consistently uses mathematical conventions correctly. - Explanations and justifications are clear and thorough.
	Application			
	Student selects and applies few appropriate trigonometric relationships in posing and solving the problems.	Student selects and applies some appropriate trigonometric relationships in posing and solving the problems.	Student selects and applies trigonometric relationships in posing and solving the problems.	Student selects and applies most efficient trigonometric relationships in posing and solving the problems.

RUBRIC FOR PERFORMANCE TASK #9 — MATH MUSIC

Scores and Criteria				
Assessment Category	Passable level of achievement – below provincial standard LEVEL 1	Moderate level of achievement – below, but approaching provincial standard LEVEL 2	High level of achievement – at provincial standard LEVEL 3	Very high to outstanding level of achievement – above provincial standard LEVEL 4
	Knowledge/ Understanding			
	Attempted graphs demonstrate limited understanding of trigonometric graphing techniques.	Graphs demonstrate some understanding of trigonometric graphing techniques.	Graphs demonstrate sufficient understanding of trigonometric graphing techniques.	Detailed graphs demonstrate thorough understanding of trigonometric graphing techniques.
	Thinking/Inquiry/Problem Solving			
	- Parts of the task were attempted but no evidence of connections between graphs and equations. - Reasoning is evident but inconsistent.	- A plan was used but connections between graphs and equations were not evident. - Reasoning is evident and logical in parts of the problem.	- An appropriate plan was used that connected the equations and graphs. - Reasoning is logical and consistent within context.	- Appropriate plan was used and solution integrated all aspects of context. - Reasoning is logical, consistent, and relates to the broader context.
	Communication			
	- Student gathers limited, but accurate information from graphs. - Few mathematical conventions are used. - Explanations and justifications are unclear.	- Student gathers some information from graphs but has difficulty interpreting it. - Some mathematical conventions are used correctly. - Explanations and justifications are understandable but unclear.	- Student gathers sufficient information from graphs and interprets it correctly. - Most mathematical conventions are used correctly. - Explanations and justifications are clear.	- Student gathers complex information from graphs and interprets it fully. - Consistently uses mathematical conventions correctly. - Explanations and justifications are clear and thorough.
	Application			
	Selected graphing technology techniques are frequently inappropriate or are used with some inaccuracies.	Selected graphing technology techniques are sometimes inappropriate or are used but may contain minor errors.	Selected graphing technology techniques are appropriate and are used correctly.	Selected graphing technology techniques are appropriate, used correctly, and are verified or supported.