Any standard highlighted in yellow has been determined by our WCSD teachers, district and state experts as essential for students to master.

Strand 11.G.SRT I can apply trigonometry to general triangles. I can extend the definitions of sine and cosine to obtuse angles (Standards G.SRT.9-11)			
Standard 11.G.SRT.9: I can derive the formula A = ½ ac sin© for the area of a triangle by drawing an auxiliary line from a vertex perpendicular to the opposite side.			
Learning Targets	**Academic Vocabulary & Notation**	**Question Stems**	**Possible Assessments**
• I can derive the formula $A = \frac{1}{2}ab \sin(C)$ for the area of a triangle by drawing an auxiliary line from a vertex perpendicular to the opposite side.	• auxiliary line, vertex, perpendicular	• Express the area of any triangle in terms of the sides and angles. • The hardest part of this unit is….	• District CFAs
Standard 11.G.SRT.10: I can prove the Laws of Sines and Cosines and use them to solve problems.			
Learning Targets	**Academic Vocabulary & Notation**	**Question Stems**	**Possible Assessments**
• I can prove the Law of Sines. • I can prove the Law of Cosines. • I can use the Law of Sines and the Law of Cosines to solve problems.	• included angle, opposite side, opposite angle	• I can derive the Law of Sines from the formula for the area of a non-right triangle. • What strategy did you use?	• District CFAs

Standard 11.G.SRT.11: I understand and can apply the Law of Sines and the Law of Cosines to find unknown measurements in right and non-right triangles (e.g., surveying problems, resultant forces).

Learning Targets	Academic Vocabulary & Notation	Question Stems	Possible Assessments
• I can use the Law of Sines or the Law of Cosines to find unknown measures in triangles.	• ambiguous case	• A radio station located adjacent to I-15 is 10 miles from where it connects to I-70. The angle between the two interstates is 48°. The station can broadcast for a range of 7 miles. If Bryce is driving on I-70, between what two distances from the intersection of the two highways can he receive the radio signal? Justify your answer.	• District CFAs