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| **Topic 3: Geometry and Trigonometry**  | **Law of Sines and Cosines** |
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| 1. A ship leaves port Q on a bearing of 045°. It sails a distance of 30 miles to point R. At R, the ship changes direction to a bearing of 115°. It sails a distance of 50 miles to reach point S. A second ship leaves port Q and sails directly to S.
	1. Find the distance ship 2 will travel
	2. Find the bearing of the course taken by the second ship
 | (4 marks)(3 marks) |
| Mark scheme:1. \*\* Drawing a picture will be helpful \*\*Finding angle QRS = 70°Using the Cosine RuleCorrect substitution into the Cosine Rule km
2. Use of the Sine Rule

 ORUse of the Cosine Rule | (A1)(M1)(A1)(A1)(M1)(A1)(A1)(M1)(A1)(A1) |