**Investigation**

**Can you find the shortest route through the Dardanelles?**

***Group 4***

Your task is to design a short, safe journey to the final destination of the AE2 submarine, through the Turkish minefields.

1. Draw a Cartesian plane on the map.
2. Record the points of the mines in the minefield.
3. Record the Starting and finish point of your journey.
4. Record the Turning points.
5. Measure the distance of each leg of the journey.
6. Use pythagoras’ theorem as another way to find the correct distance and show all your working.
7. Work out the equation of each line. Can use on online calculator.
8. Work out the direction or slope of each line.

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**Your Investigation must include:**

* Introduction

What is the question that has been asked? What mathematical devices will you use to answer the question?

* Calculations

Clearly labelled and with correct mathematical symbols

* Map

Present your data graphically. If drawing by hand ensure lines are drawn in pencil.

* Conclusion:

Answer the following questions

1. Did you get the same answer as other students? Explain why/why not.
2. Compare your results to other students.
3. Was your path the shortest?
4. How could you improve your journey through the Dardanelles?

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