**Internal Assessment Resource**

Achievement Standard Mathematics and Statistics 91256: Apply co-ordinate geometry methods in solving problems

Mathematics and Statistics 2.1

Resource title: Triangles

Credits: 2

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| Achievement | Achievement with Merit | Achievement with Excellence |
| Apply co-ordinate geometry methods in solving problems. | Apply co-ordinate geometry methods, using relational thinking, in solving problems. | Apply co-ordinate geometry methods, using extended abstract thinking, in solving problems. |

Student instructions

**Introduction**

This assessment requires you to apply co-ordinate geometry methods using a specific shape on a co-ordinate plane.

**Triangle Task**

The triangle ABC has vertices **A (2 , 1),** **B (6 , 4)** and **C (3 , 8). M** is the midpoints of the side **AC**

* What type of triangle is ABC? You must show the co-ordinate geometry methods you used to get your answer.
* Use co-ordinate geometry methods to investigate the properties of line segment **BM**.
* Show if triangles ABC and AMB are similar.

The quality of your discussion and reasoning will determine the overall grade. Show your calculations. Use appropriate mathematical statements. Clearly communicate your strategy and method at each stage of the solution.