MPM 2DB **TIPS #2: Two Wild and Crazy Points!**

\*\*Please submit your solution on a separate sheet of paper, with a well-organized and clear solution\*\*

***Problem:***

Consider the points ***A(6,9)***, ***B(4,-1)***, ***C(14,7)***, and points ***P(3,-3)***, ***Q(0,-12)***, ***R(8,-8)***.

Determine the length of the line segment that is joined by the ***centroid* of ΔABC** and the ***orthocentre* of ΔPQR.**

(you may use graph paper to guide you, but I need to see the math!)

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|  | **Level 4** | **Level 3** | **Level 2** | **Level 1** |
| **Use of planning skills**  *−* understanding the problem *(e.g., formulating and interpreting the problem, making conjectures)*  *−* making a plan for solving the problem | I can use planning  skills with a high degree of  effectiveness | I can use planning  skills with considerable  effectiveness | I can use planning  skills with some  effectiveness | I can use planning  skills with limited  effectiveness |
| **Use of processing skills**  *−* carrying out a plan *(e.g., collecting data, questioning, testing, revising, modelling, solving, inferring, forming conclusions)*  *−* looking back at the solution *(e.g., evaluating reasonableness, making convincing arguments, reasoning, justifying, proving, reflecting)* | I can use processing  skills with a high degree of  effectiveness | I can use processing  skills with considerable  effectiveness | I can use processing  skills with some  effectiveness | I can use processing  skills with limited  effectiveness |
| **Use of critical/creative**  **thinking processes**  *(e.g., problem solving, inquiry)* | I can use critical/  creative thinking  processes with a high degree of  effectiveness | I can use critical/  creative thinking  processes  with considerable  effectiveness | I can use critical/  creative thinking  processes  with some  effectiveness | I can use critical/  creative thinking  processes  with limited  effectiveness |