



PoTW 22: Week of 12-3-2021

Problem of the Week at shsmathteam.com

Submission form: [link to submit](#)

For hints: andliu22@students.d125.org

Alternatively, you can message Andrew Liu on Facebook Messenger. Please don't be afraid to reach out for help, asking for hints is heavily encouraged if you feel stuck.

Problem of the Week #22: Cool Ellipse problem

Geometry

Let \mathcal{E} be an ellipse with a major axis of length 10. Circle ω with center O is tangent to \mathcal{E} at P . The line OP intersects the major and minor axes of \mathcal{E} at X and Y , respectively. Suppose that $PX = 4$ and $PY = 6$. Find the distance between the foci of \mathcal{E} .