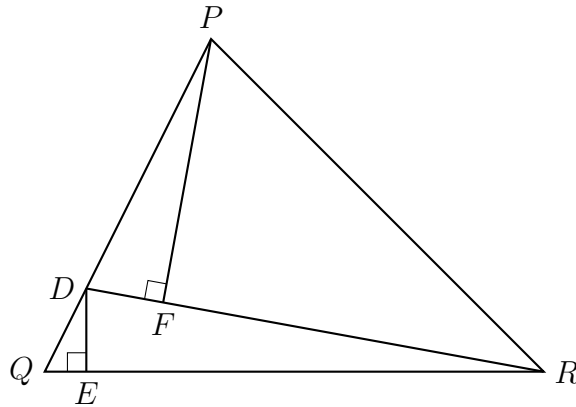


Problem 3: Elementary Geometry

In the given figure, PQR is a triangle. Point D lies on segment PQ such that $|PD| = 3 \cdot |DQ|$. From D , draw $DE \perp QR$. From P , draw $PF \perp DR$. Given that $|DR| = 10$ cm, $|QR| = 25$ cm, find the ratio $\frac{|DE|}{|PF|}$



As always, show your work, fully explain and justify your answer. A solution mainly obtained by computers or calculators will not be accepted.

Posting Date 1/30/2026. Submit solutions to Noah Aydin, Mathematics Department, RBH 319 by e-mail or hard-copy by noon on Friday, Feb 13, 2026. An email submission must be a single pdf file. Hard copy submissions must be dropped in the file holder at my office door (Hayes 319) and must include a time stamp.