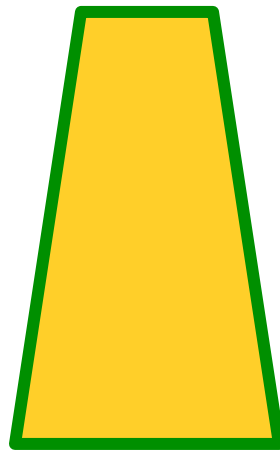


## The Map of the Land & Symbolic Extent

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The borders of Saskatchewan on a map are often represented as a trapezoid whose special shape places its circumcenter inside of quadrilateral.



Let  $a$ ,  $b$ ,  $c$ , and  $d$  be the bases, circumdiameter, and the diagonal of trapezoid respectively. Show that

$$2d = \sqrt{(c+a)(c+b)} + \sqrt{(c-a)(c-b)}$$

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