Amanda wants to fly a kite. The kite is composed of two isosceles triangles, $\triangle ABD$ and $\triangle BCD$. The height of $\triangle BCD$ is 2 times the height of $\triangle ABD$, and the width of the kite, $BD$, is 1.5 times the height of the larger triangle.

If the area of the kite is 1800 cm$^2$, what is the perimeter of the kite?

Did you know that in an isosceles triangle the altitude to the unequal side of the triangle bisects that unequal side?

More Info:
Check the CEMC at Home webpage on Thursday, April 9 for the solution to this problem. Alternatively, subscribe to Problem of the Week at the link below and have the solution, along with a new problem, emailed to you on Thursday, April 9.

This CEMC at Home resource is the current grade 9/10 problem from Problem of the Week (POTW). POTW is a free, weekly resource that the CEMC provides for teachers, parents, and students. Each week, problems from various areas of mathematics are posted on our website and e-mailed to our subscribers. Solutions to the problems are e-mailed one week later, along with a new problem. POTW is available in 5 levels: A (grade 3/4), B (grade 5/6), C (grade 7/8), D (grade 9/10), and E (grade 11/12).

To subscribe to Problem of the Week and to find many more past problems and their solutions visit: https://www.cemc.uwaterloo.ca/resources/potw.php