Challenge from kangaroo (1)

[7.5] As shown in the figure, P is a point inside the quadrilateral ABCD, $AB:BC:DA = 3:1:2$, $\angle DAB = \angle CBA = 60°$. The areas of all triangles in the figure are integers. If the areas of triangle PAD and triangle PBC are 20 and 17 respectively, then find the maximum area of quadrilateral ABCD.