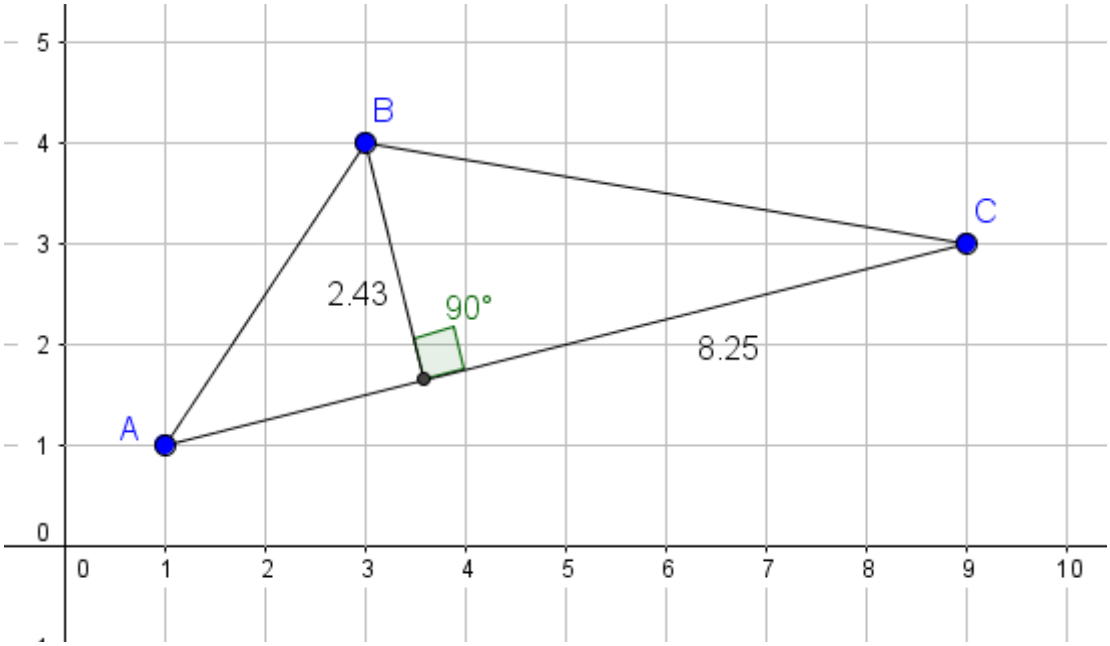
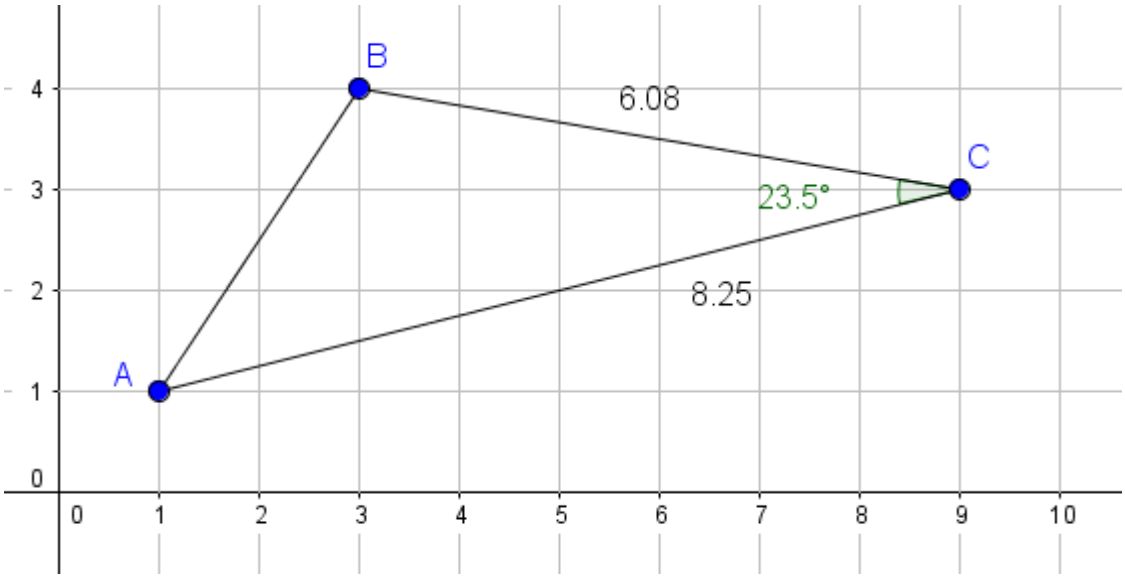
Different formula to find the area of triangle

You will find the area of the given triangle use its appropriate formula

1. Given the base and height $A=\frac{(base)(high)}{2}$

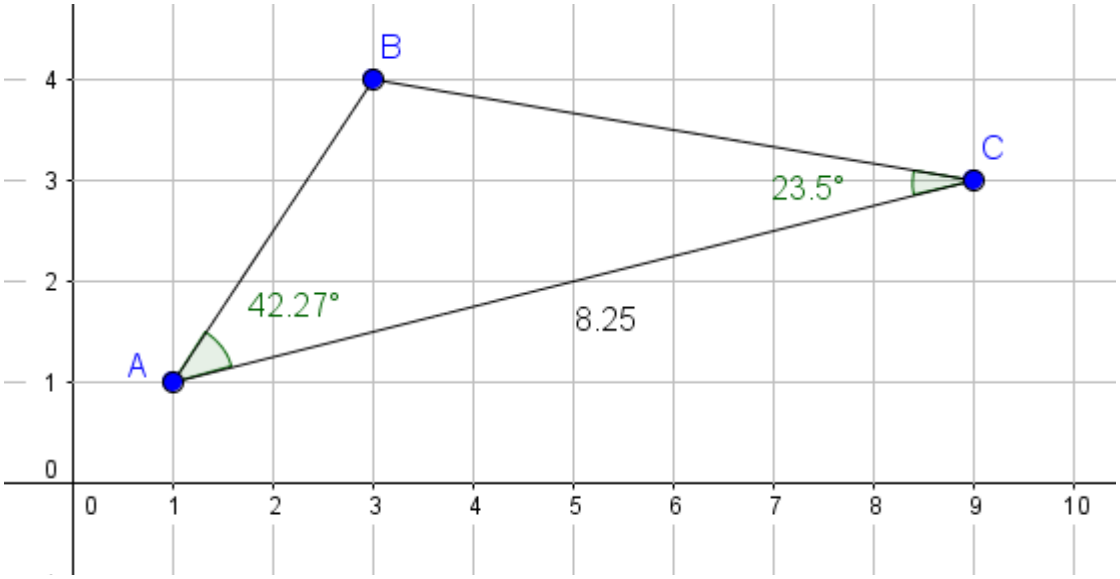


2. Given any two side's length and measurement of an angle $A=\frac{(a)(b)\sin(C)}{2}$



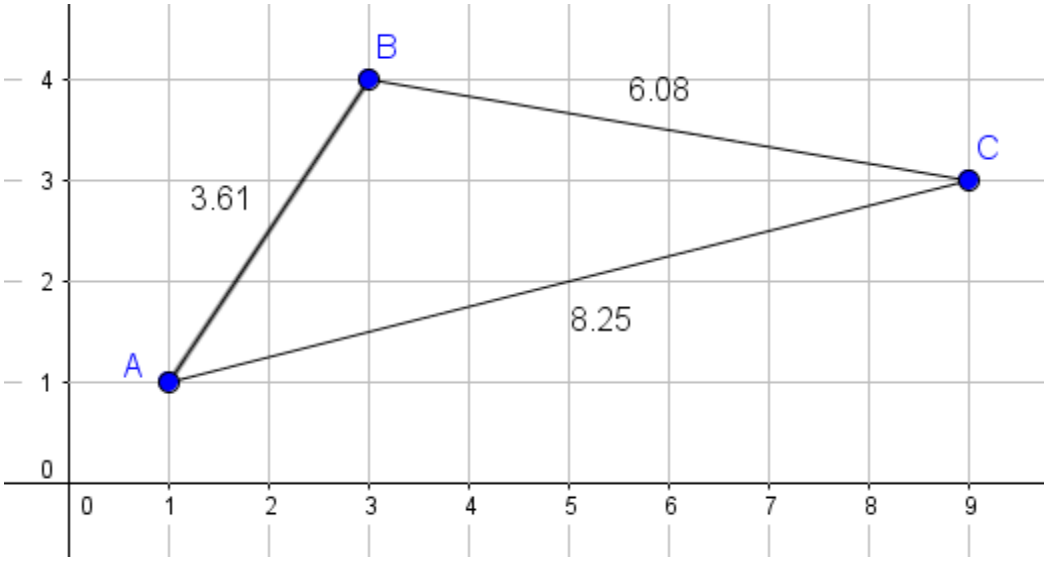
3. Given a side's length and and measurement of two adjacent angle $A=\frac{(a^2)\sin(B)\sin(C)}{2\sin(B+C)}$

Note: sin (B + C) = sin (A)

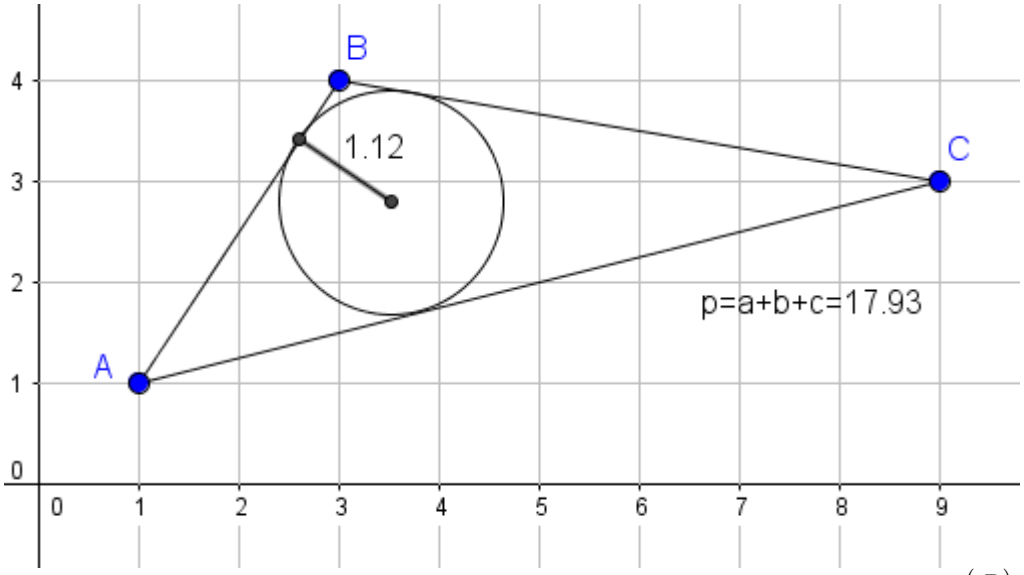


4. Given 3 side's length (Heron's formula) $A=\sqrt{s(s-a)(s-b)(s-c)}$

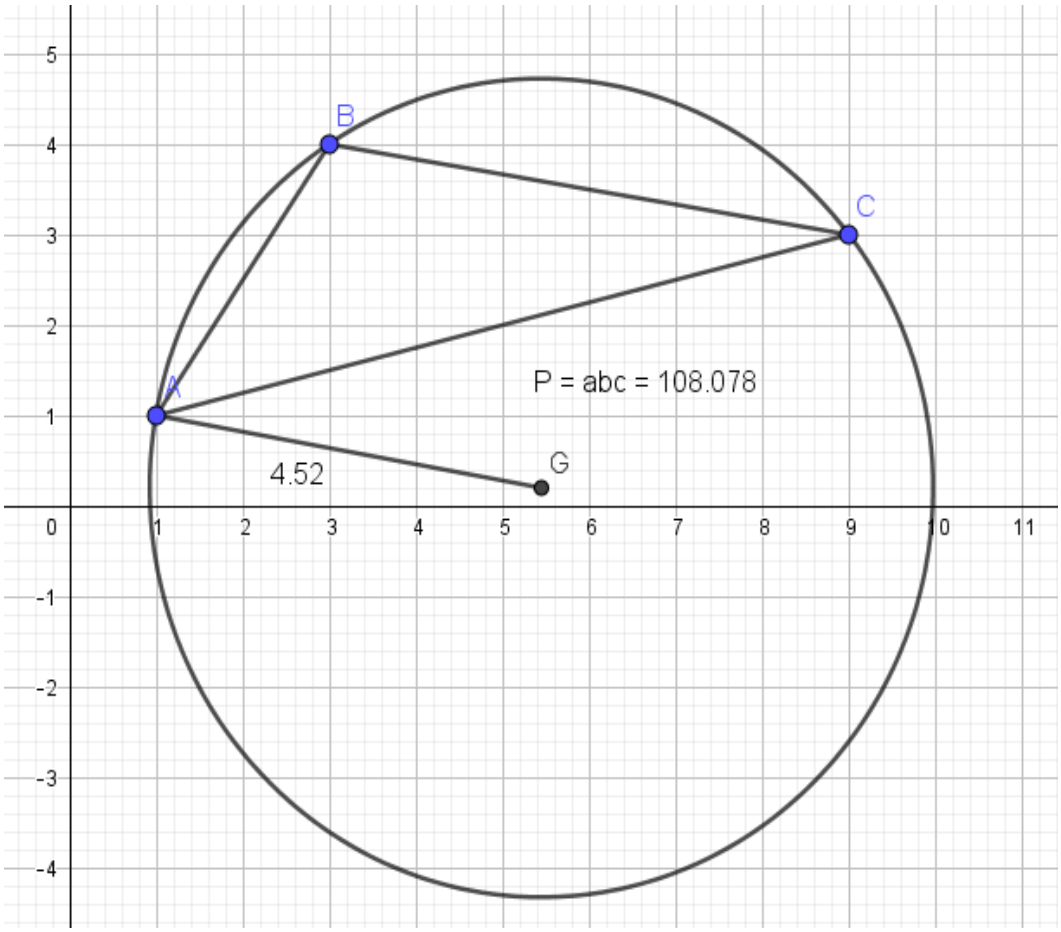
where semi-perimeter $s=\frac{(a+b+c)}{2}$



5. Given the perimeter and inradius value $A=\frac{(p)(r)}{2}$

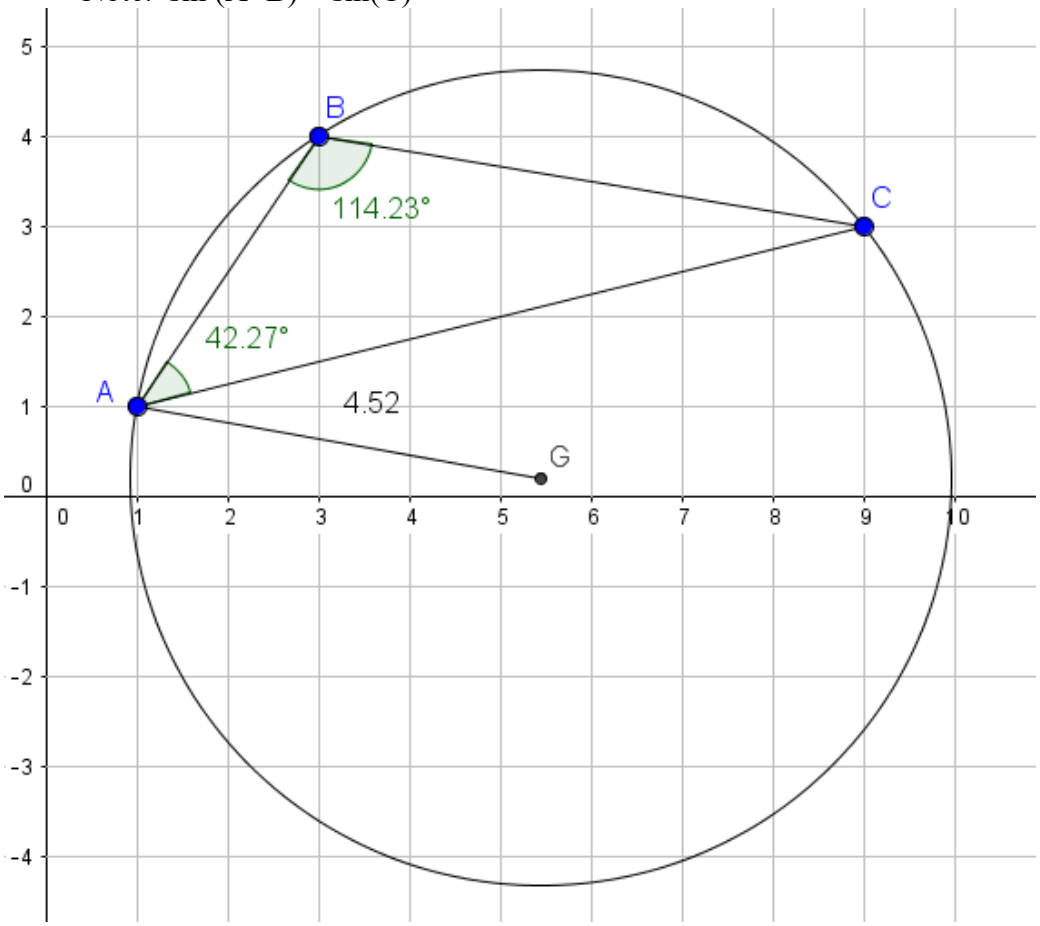


6. Given the product of three side's length and circumradius value $A=\frac{(P)}{4R}$

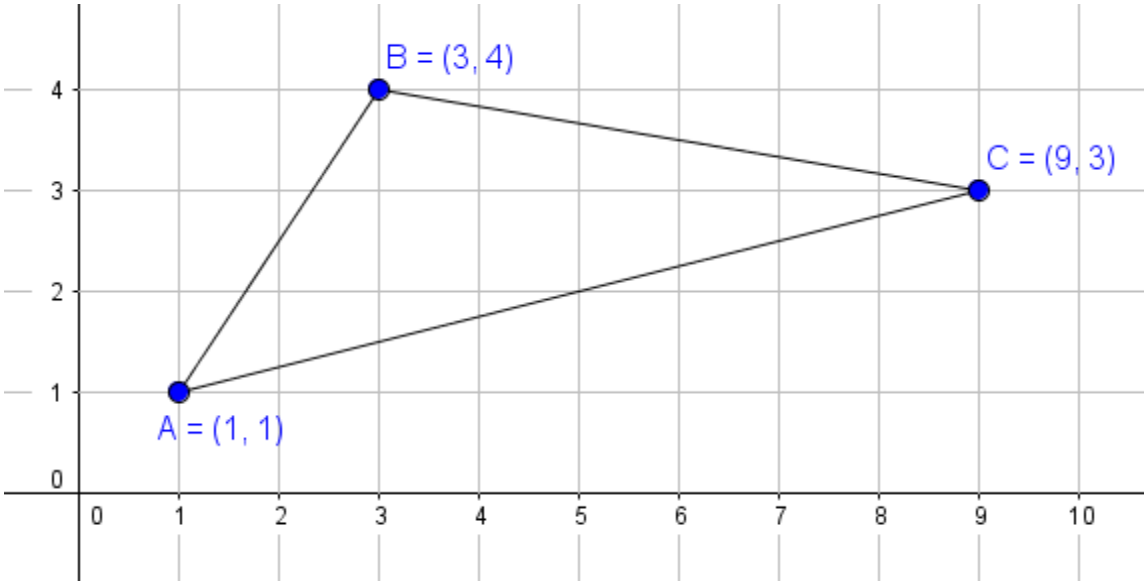


7. Given the measure of any two angles and circumradius $A = 2R^2 \sin(A)\sin(B)\sin(A+B)$

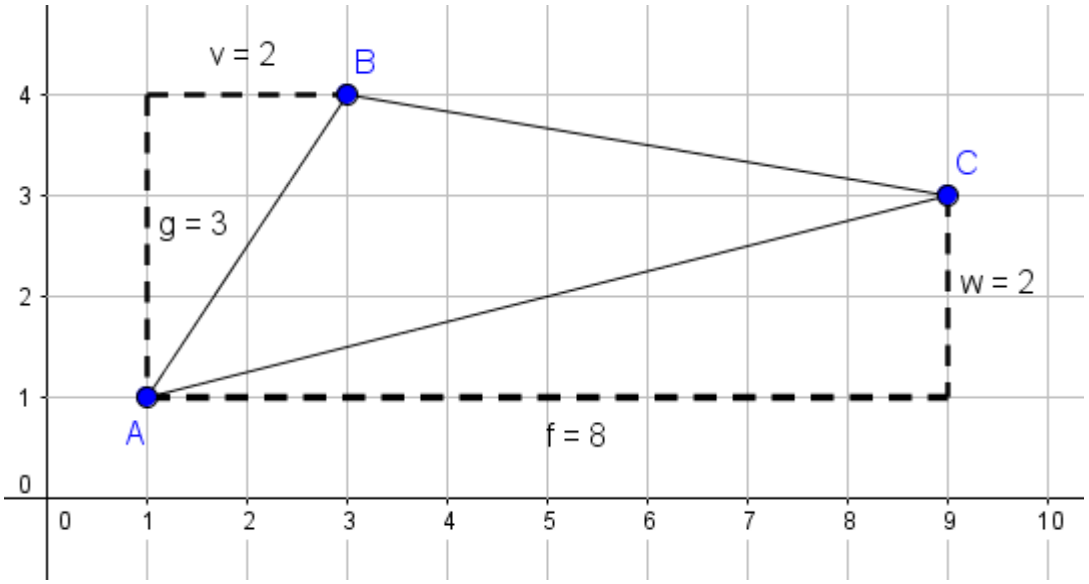
Note: sin (A+B) = sin(C)



8. Given the coordinate of 3 vertices $A = \left| \frac{(x_B y_A - x_A y_B) + (x_C y_B - x_B y_C) + (x_A y_C - x_C y_A)}{2} \right|$



9. Given the "length" of 3 vertices $A=\frac{fg-vw}{2}$ where f and v are shown as in the picture



10. Given the vertices are at integer points on a grid of points

Area = number of points inside triangle + half number of points on edge of triangle - 1
(Pick's theorem - Georg Alexander Pick)