

Proving the Formula $A = 1/2 ab \sin(C)$ - Independent Practice Worksheet

Complete all the problems.

1. In triangle opq : side $p = 3$ and side $q = 8$, $O = 45^\circ$. Find the area of triangle by using the sin rule formula.
2. In triangle RST , area of triangle = 360 m^2 , $t = 24\text{m}$, $r = 30\text{m}$. Find the value of $\sin S$.
3. In triangle DEF : Area of triangle = 28 , side $f = 8$, $E = 25^\circ$. Find the side d by sin rule formula.
4. Acute triangle XYZ , with x, y, z , being the respective opposite sides to angle X , angle Y , angle Z , and altitude, h , drawn from angle Y to y . Can you prove that: the area of triangle $XYZ = 1/2 xy \sin Z$.
5. Given side $l = 6$, side $m = 4$, and $N = 25^\circ$. Find the area of triangle by sin rule formula.
6. Can you prove that: The area of triangle $IJK = 1/2 ij \sin K$.
7. Can you prove that: The area of triangle $PQR = 1/2 pq \sin P$.
8. Acute triangle STV , with s, t, v , being the respective opposite sides to angle S , angle T , angle V , and altitude, h , drawn from angle T to t .
Can you prove that: The area of triangle $STV = 1/2 st \sin T$.
9. In triangle UVW Area of triangle = 18 , $u = 9$, $v = 5$. Find the value of $\sin W$.
10. Can you prove that: The area of triangle $BCD = 1/2 bc \sin d$.

