GEOMETRY · HOMEWORK

Develop the Law of Cosines with Trigonometry

SCORE / 25

01 Part A · Practice

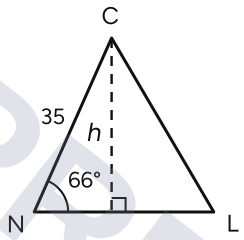
Dropping an altitude and using the Pythagorean Theorem with $h = b\sin C$ and $b\cos C$ gives $c^2 = a^2 + b^2 - 2ab\cos C$.

1 ●○○

In $\triangle GXY$, $YG = 13$, $YX = 27$, $m\angle Y = 62°$. Write the Law of Cosines equation for GX and solve. Round to the nearest tenth.

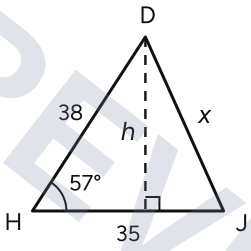
2 ●○○

In $\triangle NLC$, the altitude h from C meets NL at D. $NC = 35$ and $m\angle N = 66°$. Find ND and h. Round to the nearest tenth.



3 ●○○

In $\triangle HJD$, $HJ = 35$, $HD = 38$, $m\angle H = 57°$. Split it with the altitude from D and use the Pythagorean Theorem to find JD. Round to the nearest tenth.



4 ●○○

Evaluate $c^2 = a^2 + b^2 - 2ab\cos C$ for $a = 22$, $b = 7$, $C = 80°$. Then find c. Round to the nearest tenth.

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Preview - the full worksheet and its answer key are at primeworksheet.com