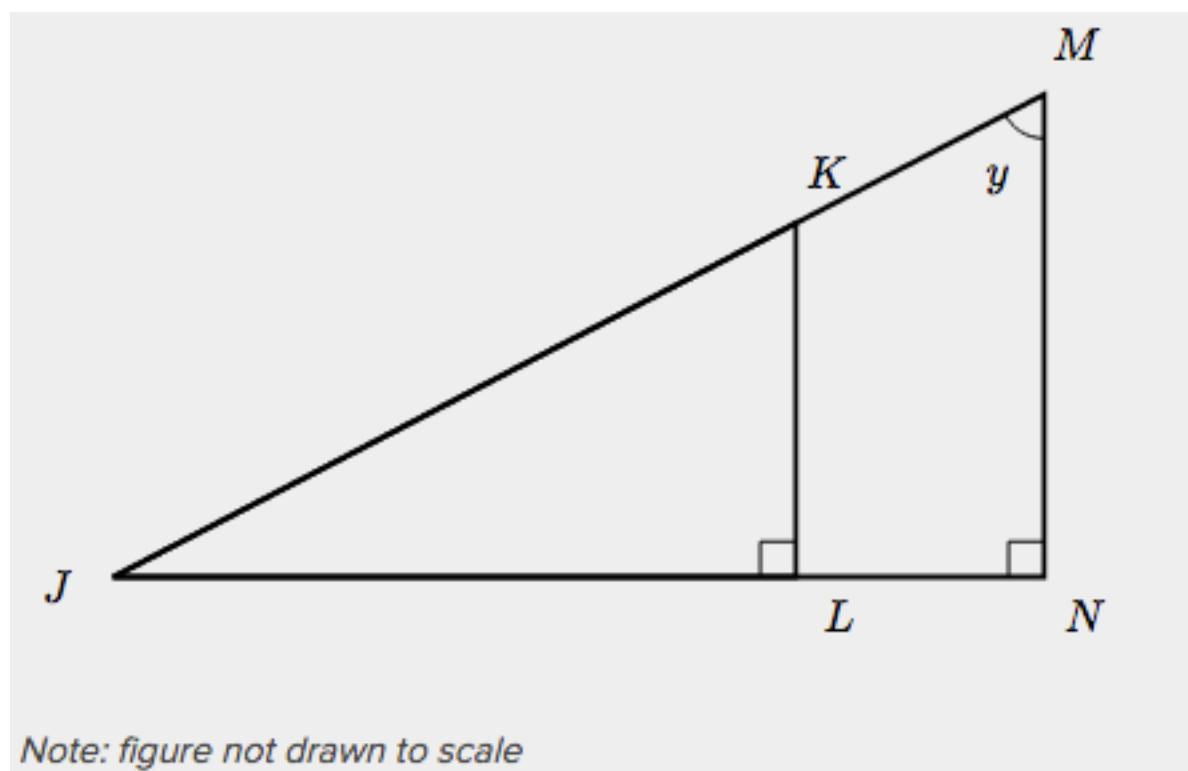


Right triangle trigonometry



In the figure at left, JLK and JNM are both right triangles. Which of the following expressions must be equal to the length of line segment \overline{KL} ?

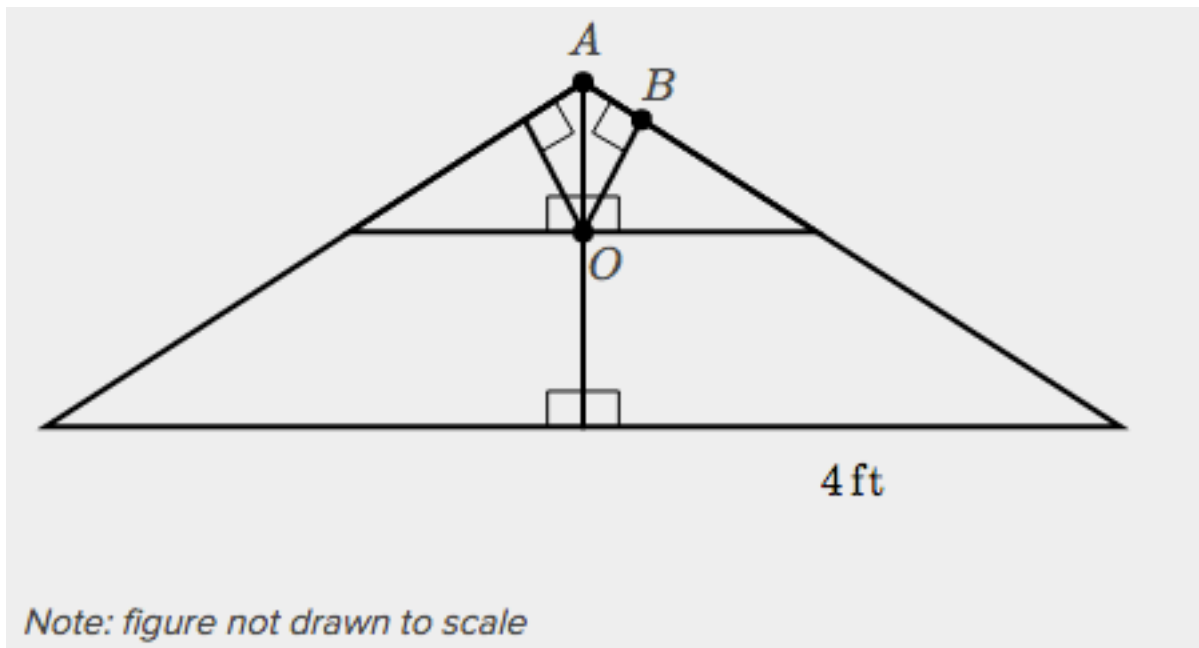
(A) $\sin(y) \cdot \frac{JK}{JL}$

(B) $\frac{1}{\cos(y)} \cdot \frac{JK}{JL}$

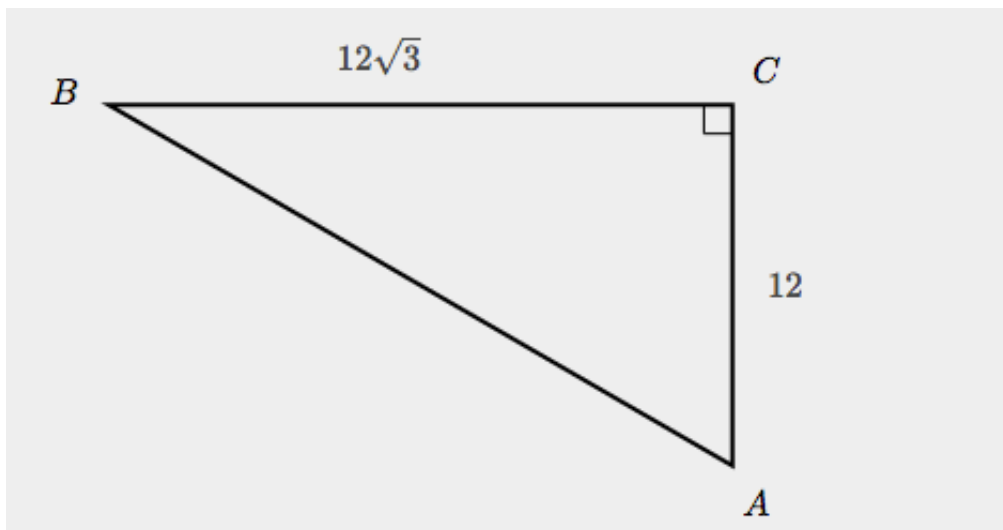
(C) $\tan(y) \cdot JL$

(D) $\frac{1}{\tan(y)} \cdot JL$

Right triangle trigonometry

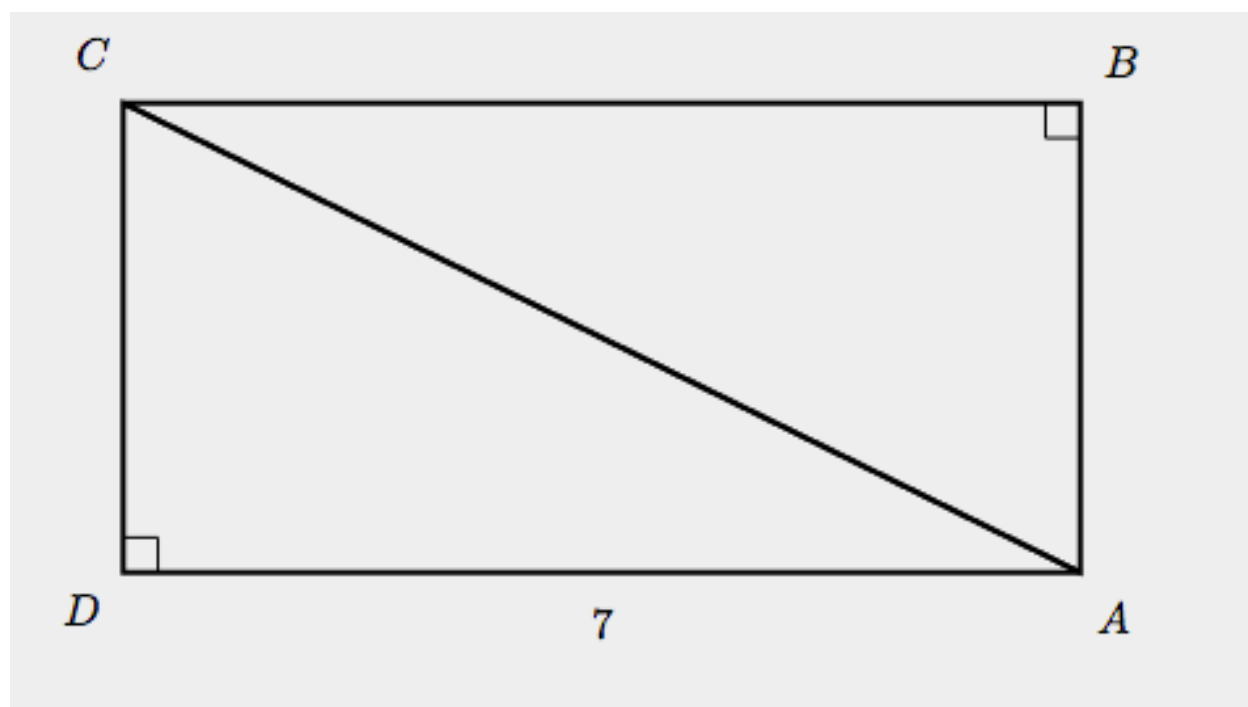


The figure at left has a vertical line of symmetry in the middle. Half the length of the base is 4 feet (ft). Angle BOA is 30° and line segment \overline{BA} is 6 inches in length. Given that $\sqrt{3} \approx 1.73$, approximately how tall is the figure in inches, to the nearest inch?



What is the measure in degrees of $\angle BAC$ in the figure shown at left?

Right triangle trigonometry



It is given that $\sin(27^\circ) \approx 0.45$, $\cos(27^\circ) \approx 0.89$, and $\tan(27^\circ) \approx 0.51$. In the figure at left, $\angle CDA$ and $\angle CBA$ are right angles, \overline{CD} is parallel to \overline{AB} , and \overline{CB} is parallel to \overline{DA} . Given that the length of \overline{AD} is 7 and the measure of $\angle DAC$ is 27° , which of the following is closest to the length of \overline{AB} ?

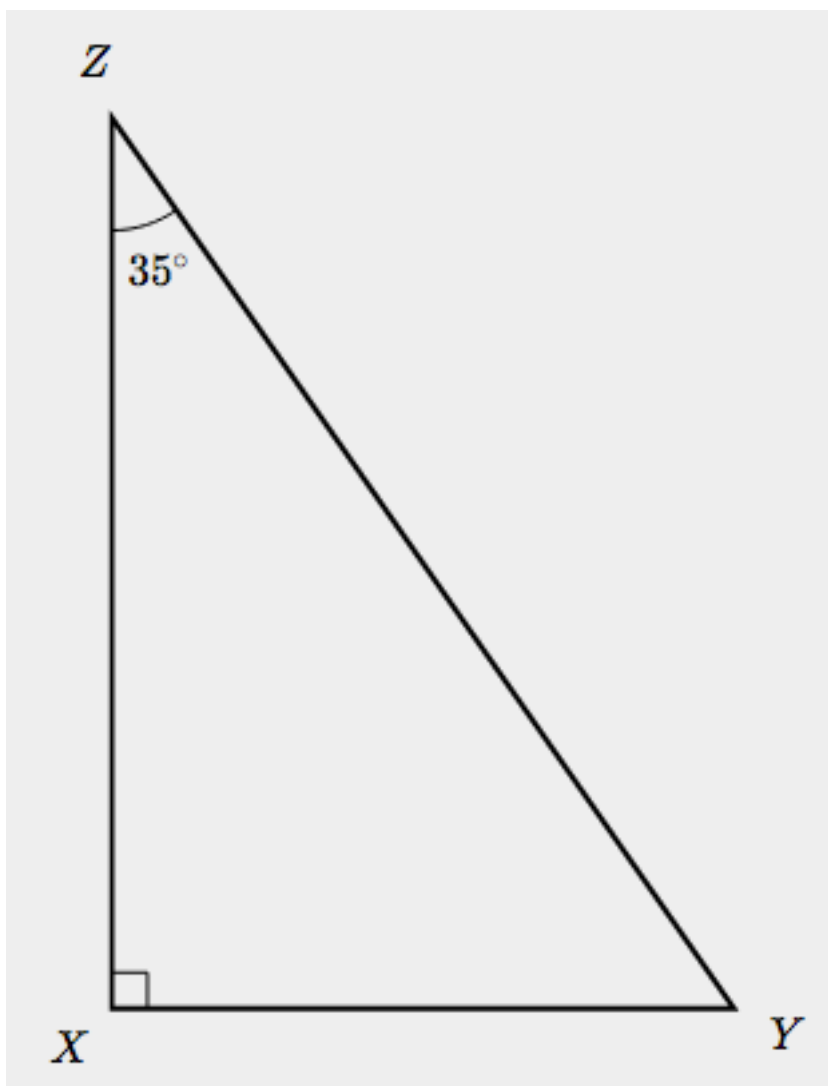
A 3.18

B 3.57

C 7.86

D 13.74

Right triangle trigonometry



Which expression is equivalent to $\cos(35^\circ)$ in the right triangle shown to the left?

(A) $\sin \angle Z$

(B) $\sin \angle Y$

(C) $\cos \angle Y$

(D) $\cos \angle X$
