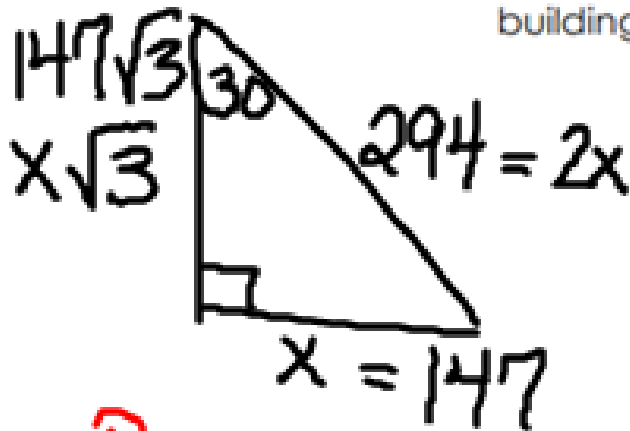


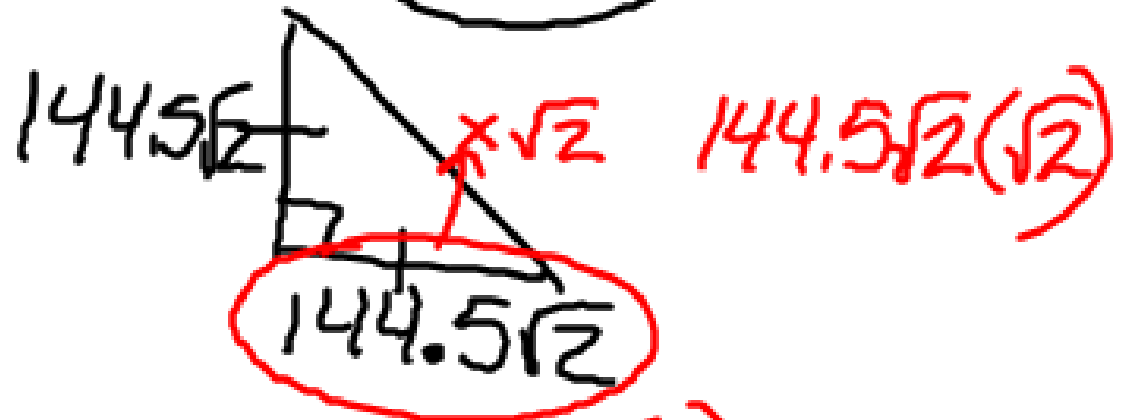
**BEAT THE TEST!**

1. The base of the engineering building at Lenovo Tech Industries is approximately a  $30^\circ - 60^\circ - 90^\circ$  triangle with a hypotenuse of about 294 feet. The base of the engineering building at Asus Tech Industries is approximately an isosceles right triangle with a side about  $144.5\sqrt{2}$  feet.

What is the difference between the perimeters of the two buildings? Round your answer to the nearest hundredth.



$$\begin{array}{r} P = 254.6115 \\ + 294 \\ + 147 \\ \hline 695.6115 \end{array}$$



$$\begin{array}{r} P = 204.3539(2) \\ + 289 \\ \hline 697.7078 \end{array}$$

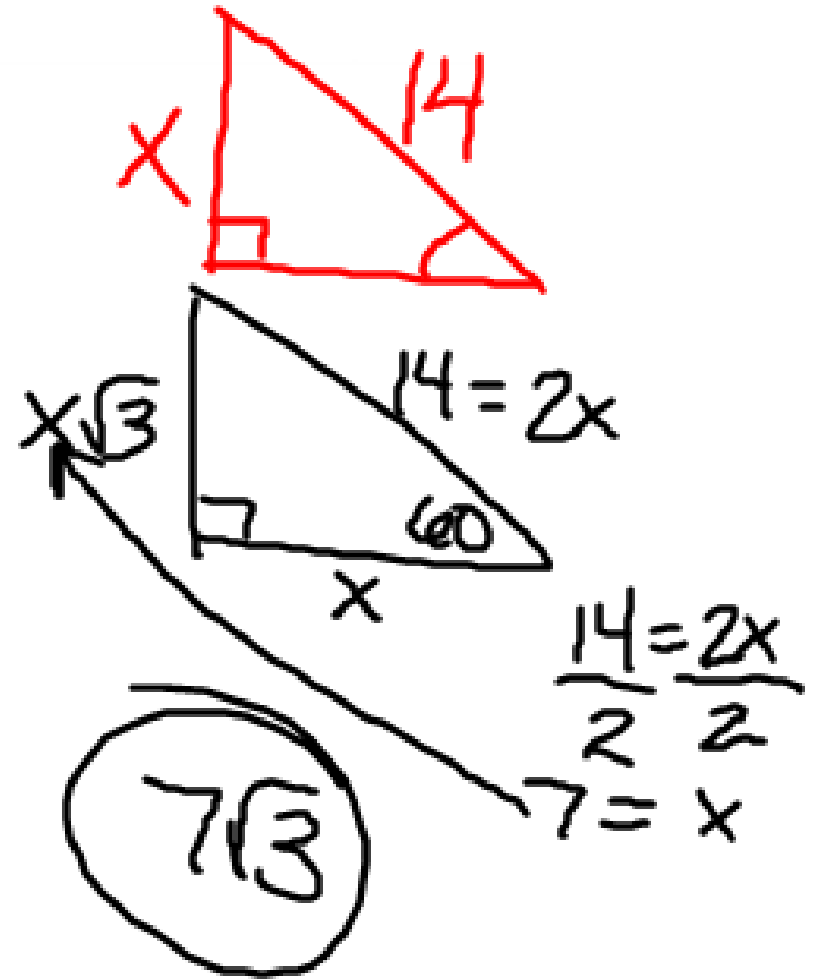
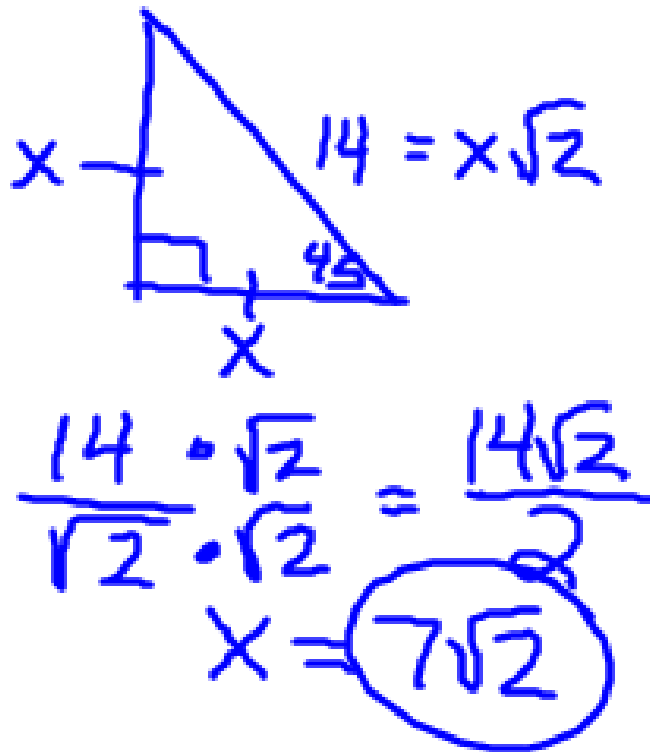
$$2.0963$$

$$697.7078 - 695.6115 = 2.10$$

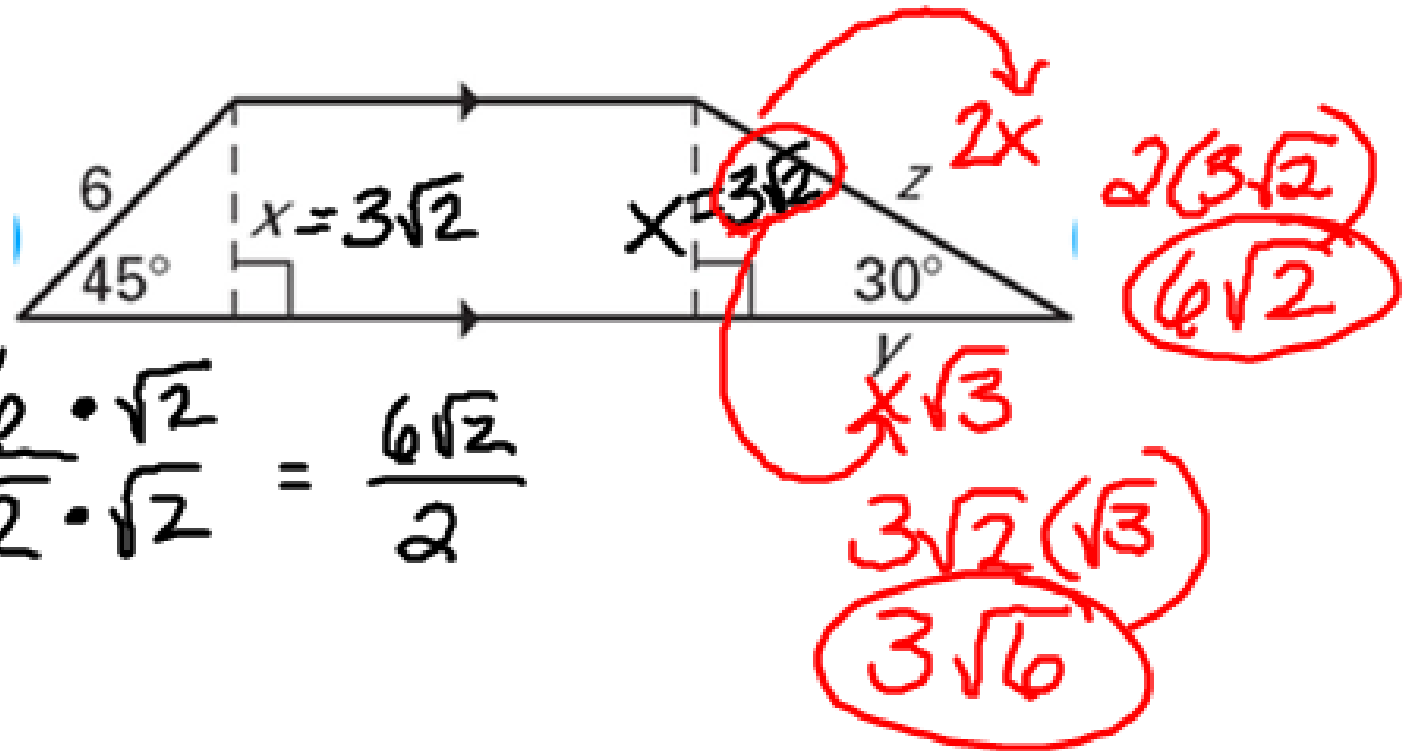
**Dump Truck** The body of a dump truck is raised to empty a load of sand. How high is the 14 foot body from the frame when it is tipped upward at the given angle?



- a.  $45^\circ$  angle      b.  $60^\circ$  angle



You try: Find the values of  $x$ ,  $y$ , and  $z$ .



$$\frac{6 \cdot \sqrt{2}}{\sqrt{2} \cdot \sqrt{2}} = \frac{6\sqrt{2}}{2}$$