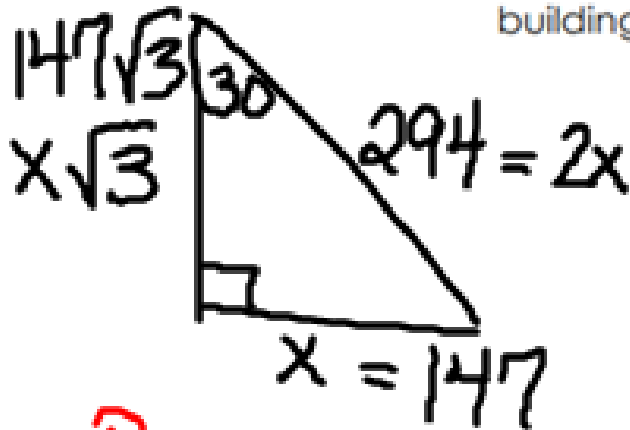


BEAT THE TEST!

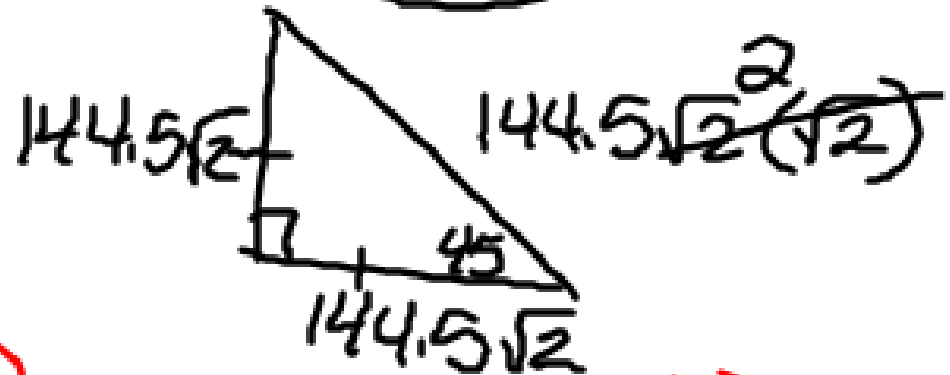
1. The base of the engineering building at Lenovo Tech Industries is approximately a $30^\circ - 60^\circ - 90^\circ$ triangle with a hypotenuse of about 294 feet. The base of the engineering building at Asus Tech Industries is approximately an isosceles right triangle with a side about $144.5\sqrt{2}$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

2.0963
mm

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



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



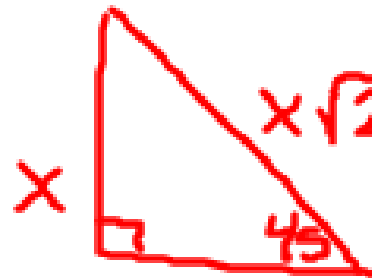
$$\begin{array}{r} P = 204.3539(2) \\ + 289 \\ \hline 697.7078 \\ - 695.6115 \\ \hline (2.0963) \end{array}$$

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° angle

b. 60° angle

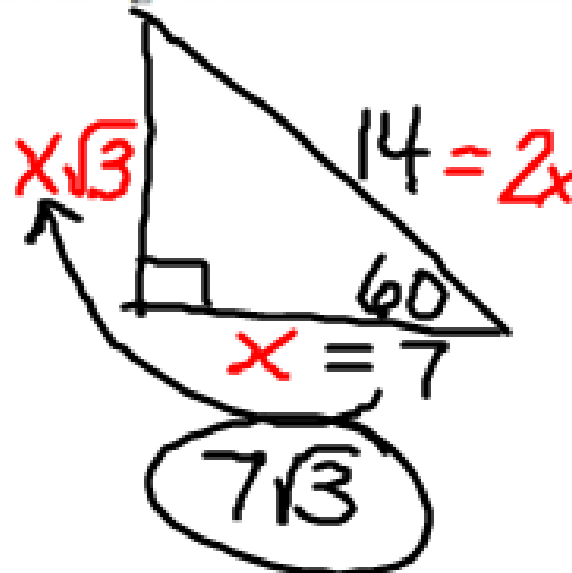


$$7\sqrt{2}$$

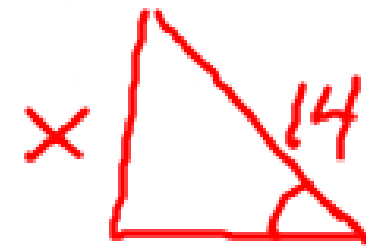
$$x\sqrt{2} = 14$$

$$\frac{14 \cdot \sqrt{2}}{\sqrt{2} \cdot \sqrt{2}}$$

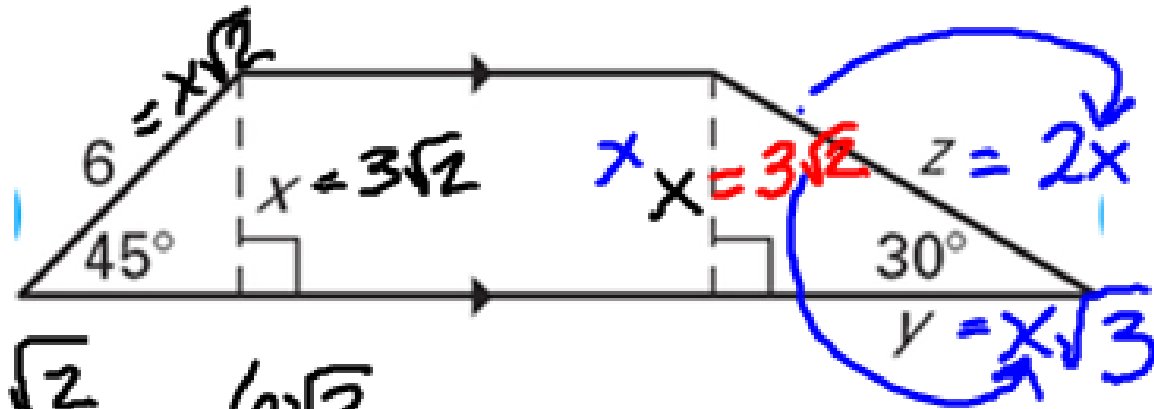
$$\frac{14\sqrt{2}}{2}$$



$$7\sqrt{3}$$



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



$$\frac{6}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{6\sqrt{2}}{2}$$
$$= 3\sqrt{2}$$

$$z = 2(3\sqrt{2})$$
$$= 6\sqrt{2}$$

$$y = 3\sqrt{2} \cdot \sqrt{3}$$
$$= 3\sqrt{6}$$