

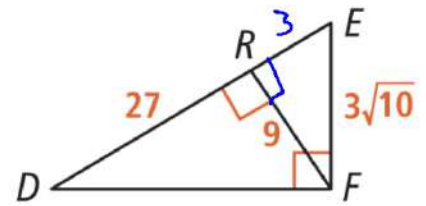
Use $\triangle DEF$ to find ER .

Enter your answer: $9^2 + ER^2 = (3\sqrt{10})^2 \rightarrow 81 + ER^2 = 90$
 $ER^2 = 9$

$$\frac{RE}{9} = \frac{9}{27}$$

$$27x = 81$$

$$x = 3$$



Use $\triangle DEF$ to find DF .

$$27^2 + 9^2 = DF^2$$

$$729 + 81 = DF^2$$

$$810 = DF^2$$

$$DF = 28.46$$

$$\frac{27}{X} = \frac{X}{30}$$

$$X^2 = 810$$

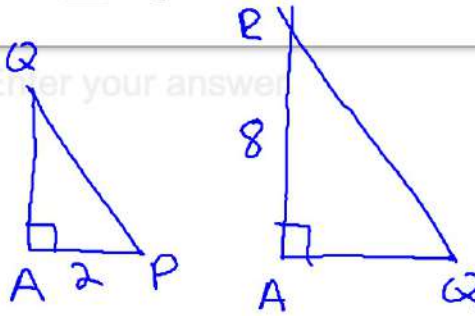
$$X = 28.46$$

Use $\triangle DEF$ to find DE .

$$30$$

Use $\triangle PQR$ to find QA.

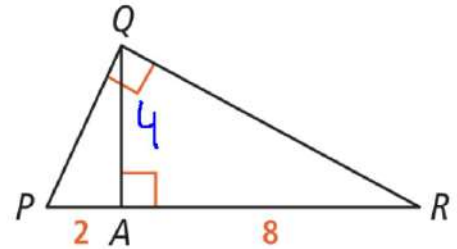
Enter your answer



$$\frac{AP}{QA} = \frac{QA}{AR}$$

$$\frac{2}{x} = \frac{x}{8}$$

$$x^2 = 16$$

$$x = 4$$


$$2^2 + 4^2 = PQ^2$$

$$4 + 16 = PQ^2$$

$$20 = PQ^2$$

$$PQ = 4.47$$

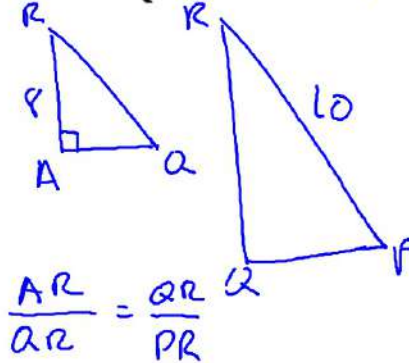
Use $\triangle PQR$ to find QR.

$$4^2 + 8^2 = QR^2$$

$$16 + 64 = QR^2$$

$$80 = QR^2$$

$$QR = 8.94$$



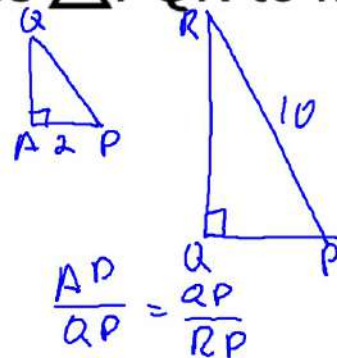
$$\frac{AR}{QR} = \frac{QR}{PR}$$

$$\frac{8}{x} = \frac{x}{10}$$

$$x^2 = 80$$

$$x = 8.94$$

Use $\triangle PQR$ to find PQ.



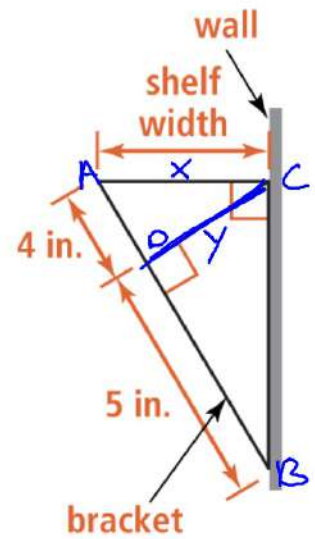
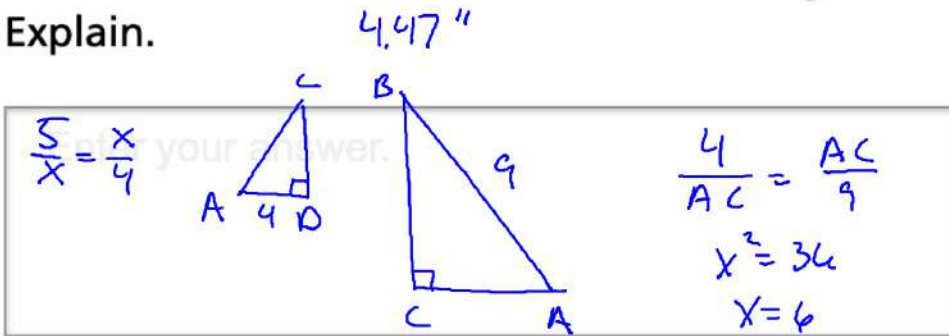
$$\frac{AP}{QP} = \frac{QP}{RP}$$

$$\frac{2}{x} = \frac{x}{10}$$

$$x^2 = 20$$

$$x = 4.47$$

10. Deshawn installs a shelf bracket. What is the widest shelf that will fit without overhang? Explain.



$4^2 + (4.417)^2 = AC^2$

$16 + 19.98 = AC^2$

$35.98 = AC^2$

$AC = 5.99$
 ≈ 6

CHECK ANSWER

