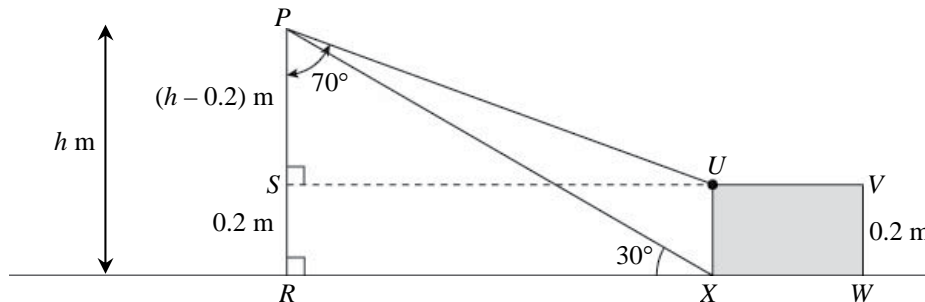




## CHAPTER 10: ANGLES OF ELEVATION AND DEPRESSION

### Paper 1

#### Solution to Question 14



$$\begin{aligned}\angle RPX &= 90^\circ - 30^\circ \\ &= 60^\circ\end{aligned}$$

$$\begin{aligned}\text{Therefore, } \frac{RX}{PR} &= \tan 60^\circ \\ RX &= h \tan 60^\circ\end{aligned}$$

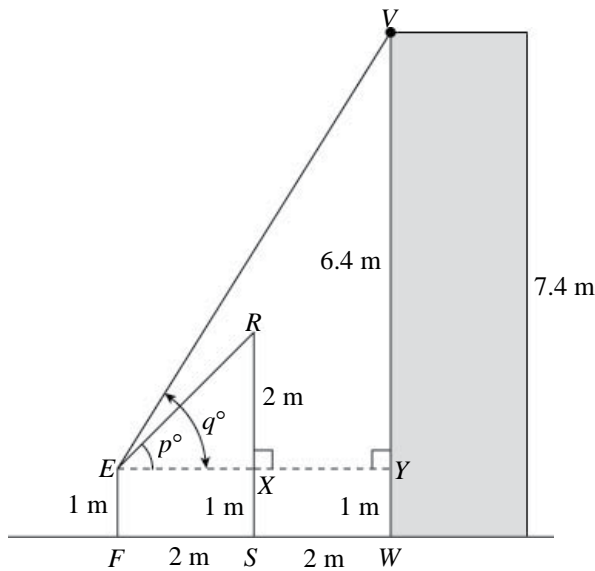
$$\text{In } \triangle PSU, \frac{SU}{PS} = \tan 70^\circ$$

$$\text{But } SU = RX = h \tan 60^\circ \text{ and } PS = h - 0.2$$

$$\begin{aligned}\text{Thus, } \frac{h \tan 60^\circ}{h - 0.2} &= \tan 70^\circ \\ 1.732h &= 2.747(h - 0.2) \\ &= 2.747h - 0.5494 \\ 0.5494 &= 2.747h - 1.732h \\ &= 1.015h \\ h &= \frac{0.5494}{1.015} \\ &= 0.54\end{aligned}$$

**Answer: D**

**Solution to Question 17**



In  $\triangle ERX$ ,  
 $\tan p^\circ = \frac{2}{2}$   
 $= 1$   
 $p = 45$

In  $\triangle EVY$ ,  
 $\tan q^\circ = \frac{6.4}{4}$   
 $= 1.6$   
 $q = 58$

Thus,  $q - p = 58 - 45$   
 $= 13$

**Answer: B**