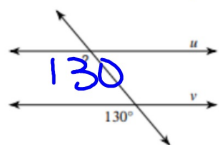
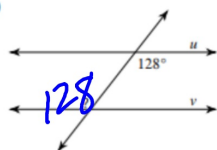


Part I: Give the name of the angle pair and their relationship (congruent or supplementary) in each diagram. Then find the value of the ? assuming that lines  $u$  and  $v$  are parallel.

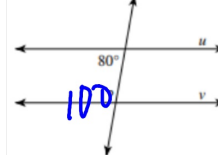
1. corresp  $\cong$



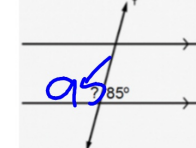
2. alt int  $\cong$



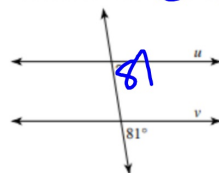
3. SS I supp



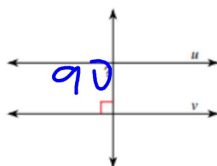
4. LP supp!



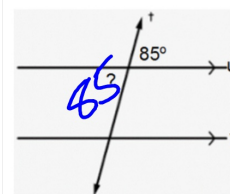
5. corresp  $\cong$



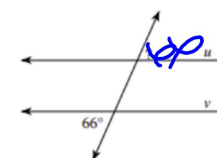
6. SS I supp



7. vert.  $\cong$

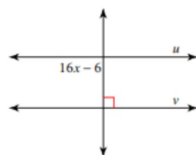


8. alt ext =



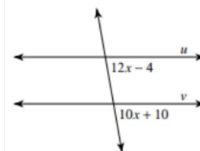
Part II: Find the value of  $x$  that makes lines  $u$  and  $v$  parallel.

9. The angles in the diagram are alt int angles and they are ≅ (choose congruent or supplementary).



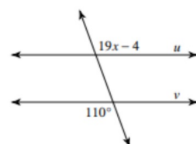
$$\begin{aligned} 16x - 6 &= 90 \\ 16x &= 96 \\ x &= 6 \end{aligned}$$

10. The angles in the diagram are corr sp angles and they are ≅ (choose congruent or supplementary).



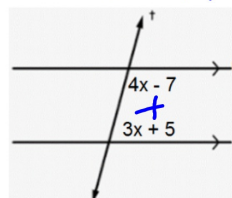
$$\begin{aligned} 12x - 4 &= 10x + 10 \\ 2x &= 14 \\ x &= 7 \end{aligned}$$

11. The angles in the diagram are alt ext angles and they are ≅ (choose congruent or supplementary).



$$\begin{aligned} 19x - 4 &= 110 \\ 19x &= 114 \\ x &= 6 \end{aligned}$$

12. The angles in the diagram are SSI angles and they are suppl (choose congruent or supplementary).

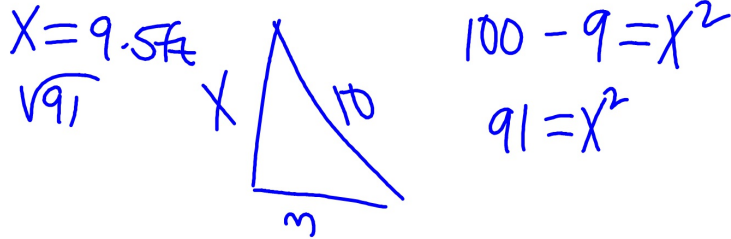


$$\begin{aligned} 4x - 7 &+ 3x + 5 = 180 \\ 7x - 2 &= 180 \\ 7x &= 182 \\ x &= 26 \end{aligned}$$

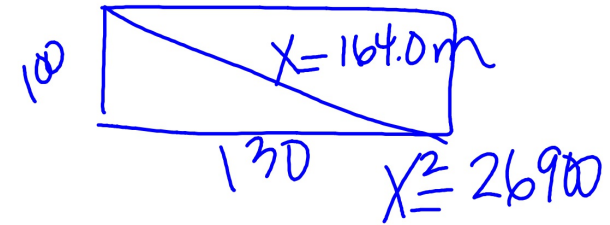
### Pythagorean Theorem Word Problems

Draw a picture and then use the pythagorean theorem to solve for the missing side.

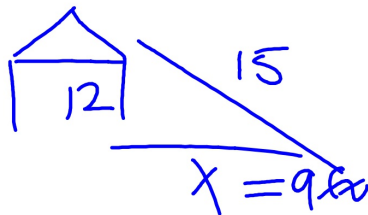
1. The bottom of a ladder must be placed 3 feet from a wall. The ladder is 10 feet long. How far above the ground does the ladder touch the wall?



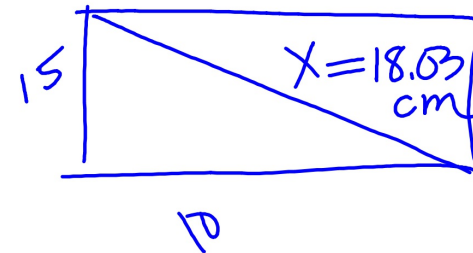
2. A soccer field is a rectangle 100 meters wide and 130 meters long. The coach asks players to run from one corner to the other corner diagonally across. What is that distance?



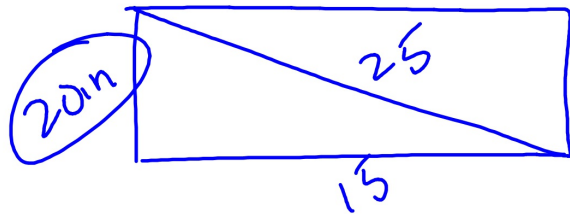
3. How far from the base of the house do you need to place a 15-foot ladder so that it exactly reaches the top of a 12-foot tall wall?



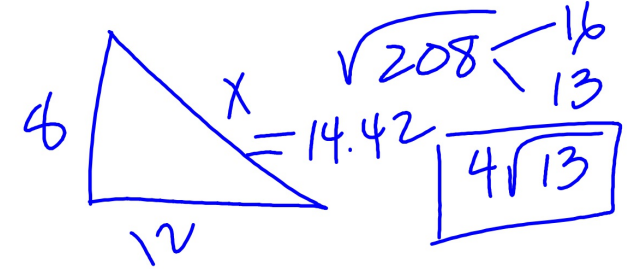
4. What is the length of the diagonal of a 10 cm by 15 cm rectangle?



5. The diagonal of a rectangle is 25 in. The width is 15 inches. What is the length?



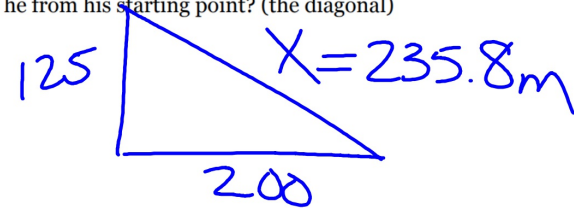
6. Two sides of a right triangle are 8 and 12. Find the hypotenuse.



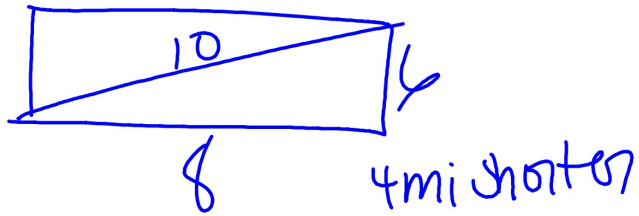
7. A baseball diamond is a square that is 90 feet on each side. What is the distance a catcher has to throw the ball from home to second base?



8. David leaves the house to go to school. He walks 200m west and 125m north. How far away is he from his starting point? (the diagonal)



9. A park is in the shape of a rectangle 8 miles long and 6 miles wide. How much shorter is your walk if you walk diagonally across the park than along the two sides of it?



### Hwk #37 - Quiz Review

- Distance Formula
- Midpoint Formula
- Pythagorean Theorem