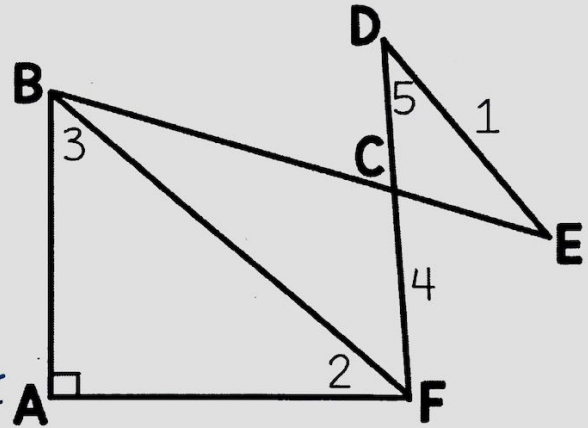


Geometry Ticket In the Door

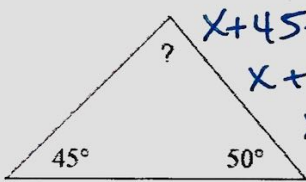
Name: Key

Use the figure to the right to answer questions 1 - 6.



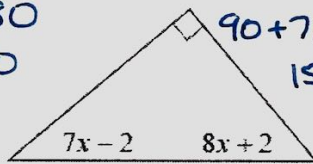
1. What is the notation for segment 1? \overline{DE}
2. Name angle #2 in two ways. $\angle AFB, \angle BFA$
3. Name angle #3 in two ways. $\angle ABF, \angle FBA$
4. What is the notation for segment 4? \overline{CF}
5. Name angle #5 in three ways. $\angle D, \angle CDE, \angle EDC$
6. Which two segments are perpendicular? $\overline{BA} \perp \overline{AF}$

7. $\angle = 85^\circ$



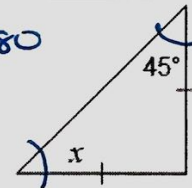
$$\begin{aligned} x + 45 + 50 &= 180 \\ x + 95 &= 180 \\ x &= 85 \end{aligned}$$

8. $x = 6$

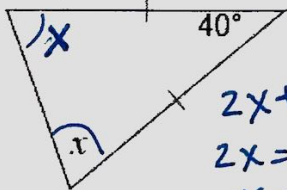


$$\begin{aligned} 90 + 7x - 2 + 8x + 2 &= 180 \\ 15x + 90 &= 180 \\ 15x &= 90 \\ x &= 6 \end{aligned}$$

9. $x = 45^\circ$



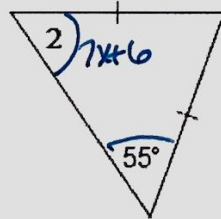
10. $x = 70^\circ$



$$\begin{aligned} 2x + 40 &= 180 \\ 2x &= 140 \\ x &= 70 \end{aligned}$$

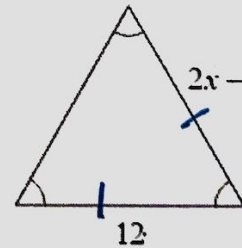
11. $x = 7$

$$m\angle 2 = 7x + 6$$



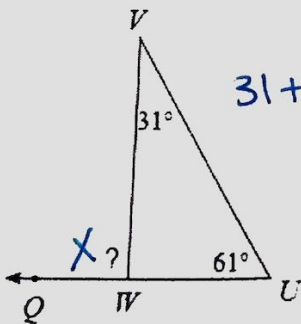
$$\begin{aligned} 7x + 6 &= 55 \\ 7x &= 49 \\ x &= 7 \end{aligned}$$

12. $x = 11$



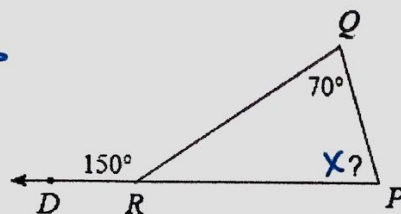
$$\begin{aligned} 2x - 10 &= 12 \\ 2x &= 22 \\ x &= 11 \end{aligned}$$

13. $\angle = 92^\circ$



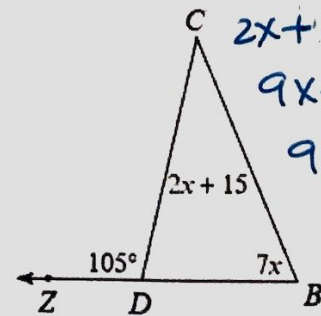
$$31 + 61 = 92^\circ$$

14. $\angle = 80^\circ$



$$\begin{aligned} 70 + x &= 150 \\ x &= 80 \end{aligned}$$

15. $x = 10$



$$\begin{aligned} 2x + 15 + 7x &= 105 \\ 9x + 15 &= 105 \\ 9x &= 90 \\ x &= 10 \end{aligned}$$