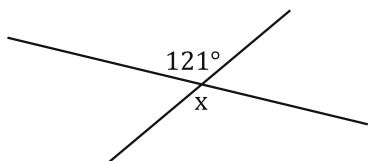


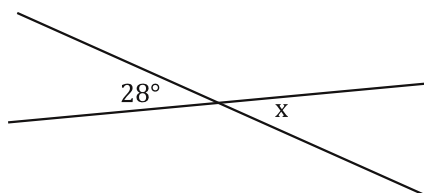
For each, state the angle relationship and find the value of x .

1.

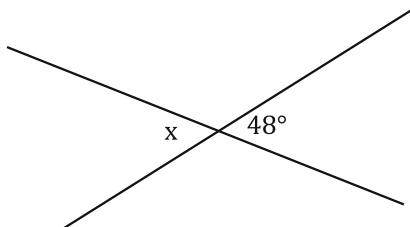


Step 1. Write out the equation and relationship.

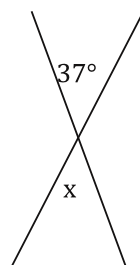
3.



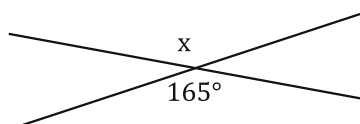
5.



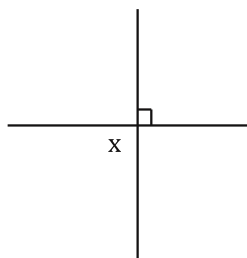
2. Don't forget to keep writing the relationship!



4.



6.

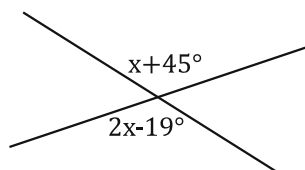


Bubble all the correct answers from above. Don't bubble incorrect answers.

- ☐ 37°
 ☐ 48°
 ☐ 59°
 ☐ 121°
 ☐ 143°
 ☐ 28°
 ☐ 152°
 ☐ 165°
 ☐ 90°
 ☐ 15°

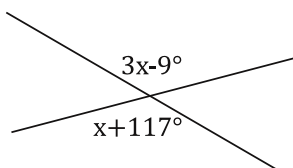
For each, state the angle relationship and solve for x .

7.

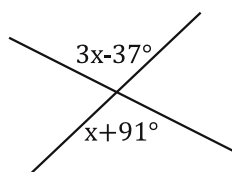


$$\begin{aligned}
 x + 45^\circ &= 2x - 19^\circ && \text{Vertical Angle Theorem} \\
 -x & && -x \\
 45^\circ &= x - 19^\circ \\
 -19^\circ & && -19^\circ \\
 26^\circ &= x
 \end{aligned}$$

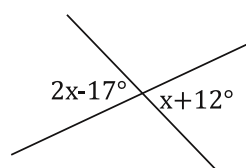
9.



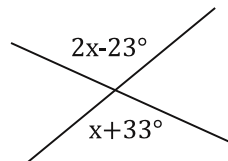
11.



10.



12.

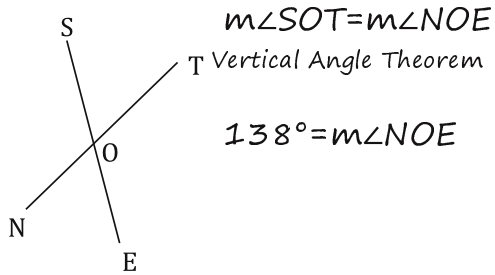


Bubble all the correct answers from above. Don't bubble incorrect answers.

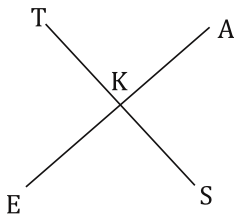
- ☐ 65°
 ☐ 38.6°
 ☐ 63.3°
 ☐ 26°
 ☐ 63°
 ☐ 56°
 ☐ 64°
 ☐ 36°
 ☐ 27°
 ☐ 29°

You're doing great. Now try these! Write the given information on the diagram, state the angle relationship, and solve for the indicated angle.

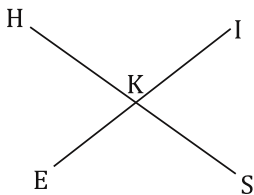
13. $m\angle SOT = 138^\circ$ Find $m\angle NOE$.



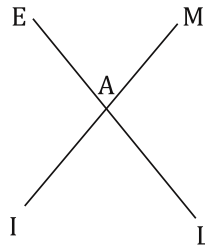
15. $m\angle TKE = 87^\circ$ Find $m\angle AKS$.



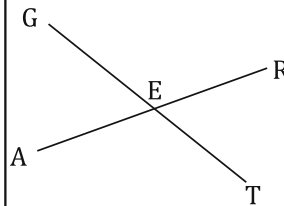
17. $m\angle IKS = 51^\circ$ Find $m\angle HKE$.



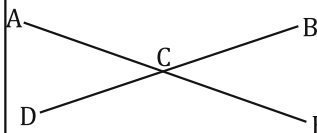
14. $m\angle EAM = 63^\circ$ Find $m\angle IAL$.



16. $m\angle GER = 147^\circ$ Find $m\angle AET$.



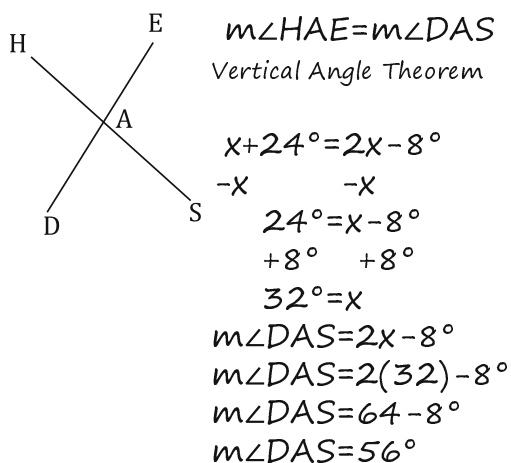
18. $m\angle DCE = 153^\circ$ Find $m\angle ACB$.



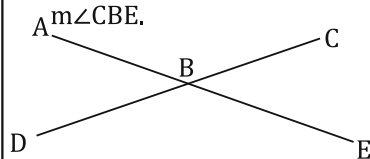
Bubble all the correct answers from above. Don't bubble incorrect answers.

☐ 138° ☐ 51° ☐ 117° ☐ 93° ☐ 33° ☐ 129° ☐ 153° ☐ 147° ☐ 63° ☐ 87°

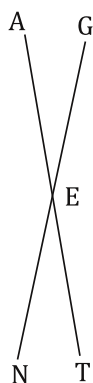
19. $m\angle HAE = x + 24^\circ$, $m\angle DAS = 2x - 8^\circ$ Find $m\angle DAS$.



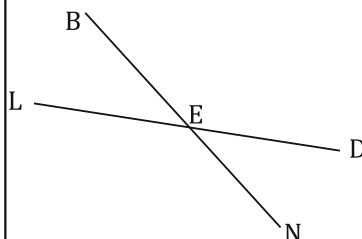
20. $m\angle ABD = 2x - 37^\circ$, $m\angle CBE = x + 65^\circ$ Find $m\angle CBE$.



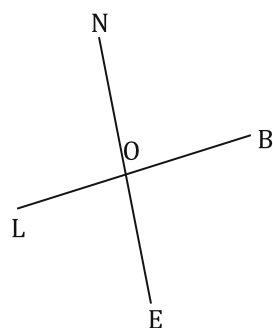
21. $m\angle GET = 3x - 51^\circ$, $m\angle AEN = 2x - 17^\circ$
Find $m\angle GET$.



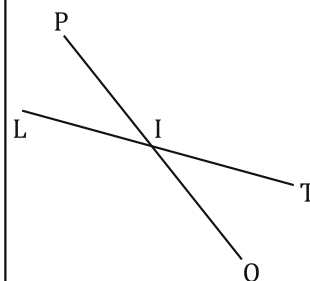
22. $m\angle LEN = x + 89^\circ$, $m\angle BED = 2x + 89^\circ$
Find $m\angle BED$.



23. $m\angle BOE = 5x + 36^\circ$, $m\angle NOL = 3x + 42^\circ$
Find $m\angle NOL$.



24. $m\angle PIT = 4x - 51^\circ$, $m\angle LIO = 3x^\circ$ Find $m\angle LIO$.



Bubble all the correct answers from above. Don't bubble incorrect answers.

- ☐ 28°
 ☐ 51°
 ☐ 167°
 ☐ 51°
 ☐ 68°
 ☐ 89°
 ☐ 0°
 ☐ 56°
 ☐ 0°
 ☐ 153°