

Basic angle rules

Apply angle rules to find missing angles in diagrams.



Name _____

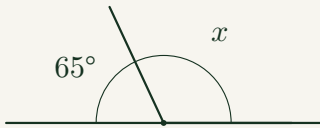
Date _____

Using angle rules

Use angles on a line (180°), angles around a point (360°), vertically opposite angles (equal), and angles in a triangle (180°) to find all missing angles. Show your working.

Worked example

Worked example: Find angle x

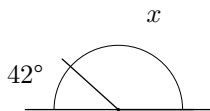


Angles on a straight line sum to 180° .

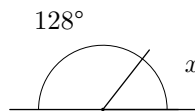
$$65^\circ + x = 180^\circ$$

$$x = 180^\circ - 65^\circ = 115^\circ$$

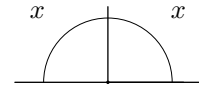
1. Find angle x



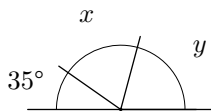
2. Find angle x



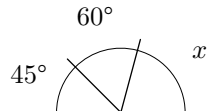
3. Find angle x



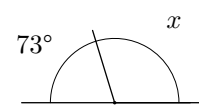
4. Find angles x and y



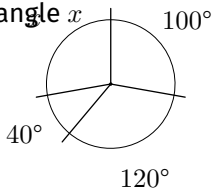
5. Find angle x



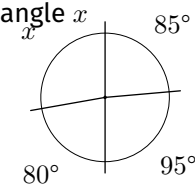
6. Find angle x



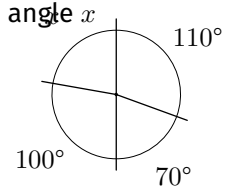
7. Find angle x



8. Find angle x

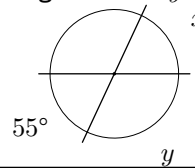


9. Find angle x



10. Four equal angles around a point. Find each angle.

11. Find angles x and y .

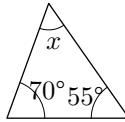


12. Two lines cross. One angle is 142° . Find the angle opposite to it.

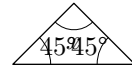
13. Find angle x in the triangle.



14. Find angle x in the triangle.

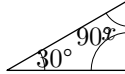


15. Find angle x in the triangle.

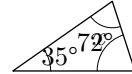


16. An equilateral triangle has all angles equal. Find each angle.

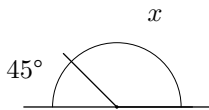
17. Find angle x in the triangle.



18. Find angle x in the triangle.

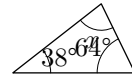


19. Find angle x using angles on a line.

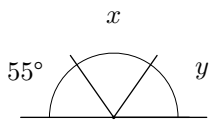


20. Two intersecting lines create four angles. One angle is 68° . Find the other three angles.

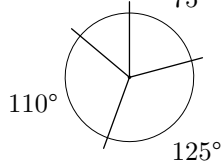
21. Find angle x in the triangle.



22. Find angles x and y on the line.



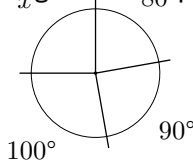
23. Find angle x around the point.



24. Explain why a triangle cannot have two 100° angles.

25. A triangle has angles in the ratio $1 : 2 : 3$. Find each angle.

26. Find angle x at the point.



27. Use the triangle angle sum rule to find x .