MATHEMATICS: ANGLES

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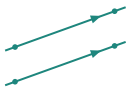
Learning Objective: To apply knowledge to find the value of one angle and more than one angle

Parallel lines do not intersect. Parallel lines are marked with the same number of arrows.

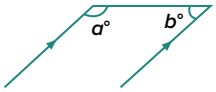
Label parallel lines thus AB || DC or BA || CD but not AB || CD.



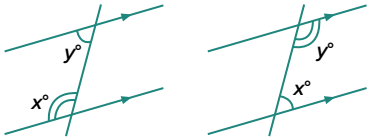
If two parallel lines are cut by a transversal: The corresponding angles are equal.

The alternative angles are equal.

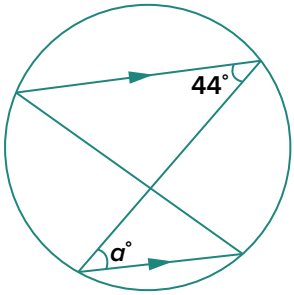
A transversal is a line cutting two or more parallel lines.

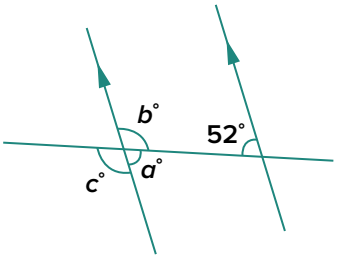


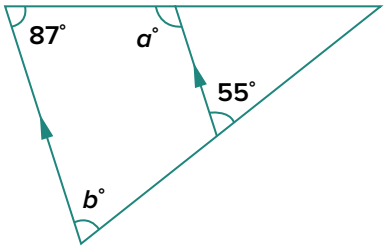
The co-interior angles are supplementary (sum to 180°)



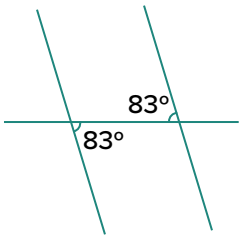
Find the value of one or more angles in the diagrams below and give reasons.

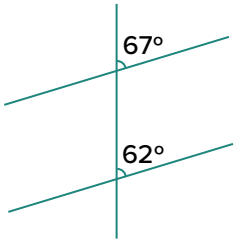


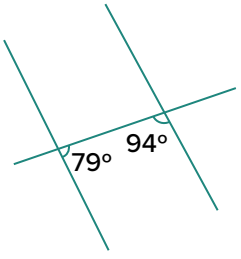




Prove the following lines are parallel.







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MATHEMATICS: ANSWER SHEET

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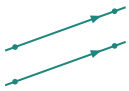

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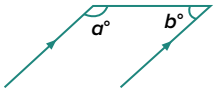

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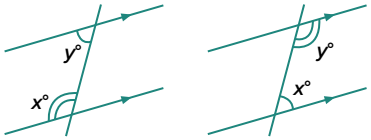

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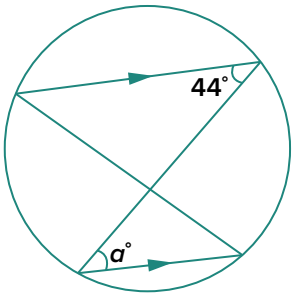
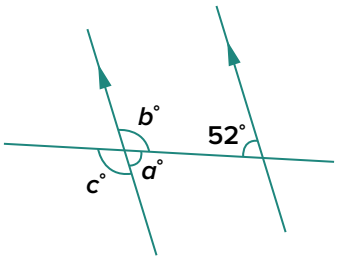
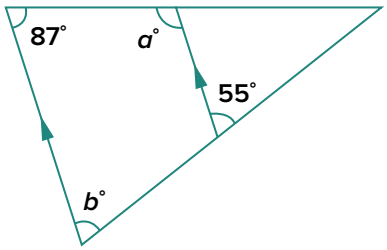


a° = 44°
Corresponding angles are equal

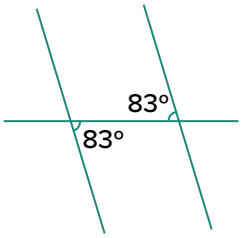


a = 52°
(alternate angles on parallel lines)
b + 52° = 180°
(co-interior angles on parallel lines)
b = 128°
c = 128°
(vertically opposite angles)

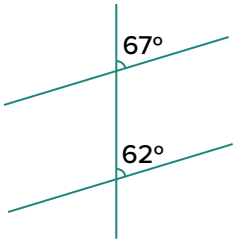


a + 87 = 180°
(co-interior angles on parallel lines)
a = 93°
b = 55°
(corresponding angles on parallel lines)

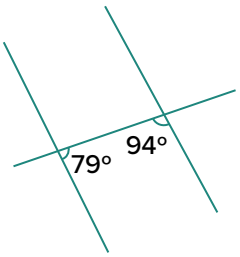
Prove the following lines are parallel.



Parallel
Corresponding angles are equal
83° = 83°



Not parallel
Alternate angles are equal
62° ≠ 67°



Not Parallel
Cointerior angles sum to 180°
79° + 94° ≠ 180