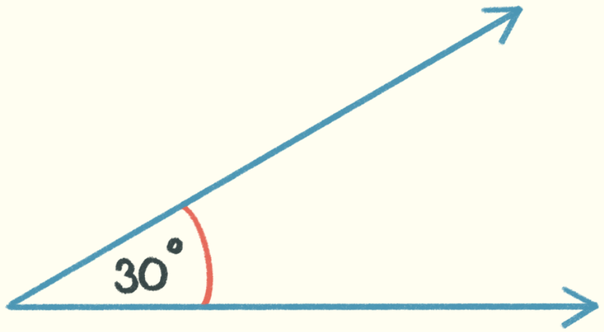
ANGLE FACTS

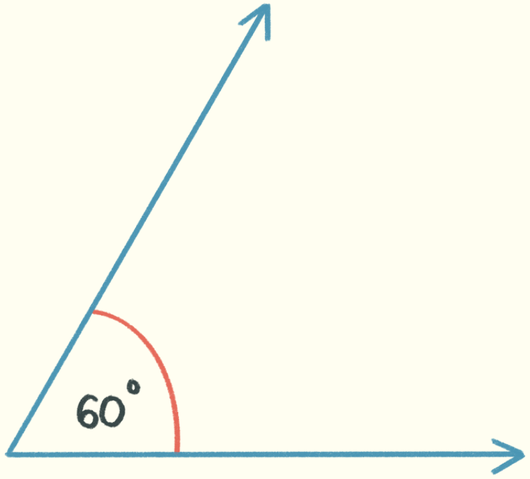
LEARNING OUTCOMES

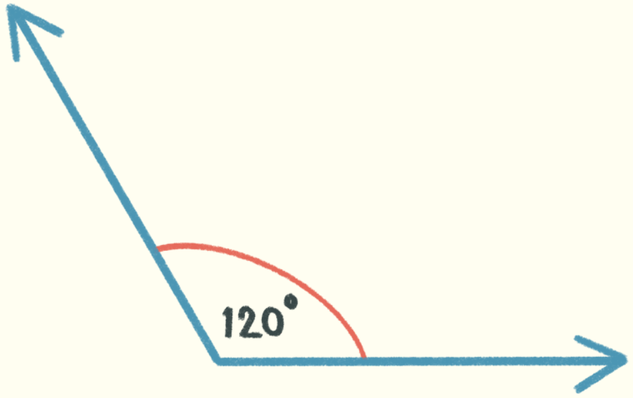
- Review and apply basic angle facts
- Find missing angles in complex angle problems

WHAT IS AN ANGLE?

An angle is formed by two line segments that join to form a vertex.
It is a measure of turn and is typically expressed
in degrees or radians



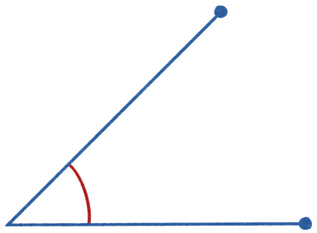




TYPES OF ANGLES

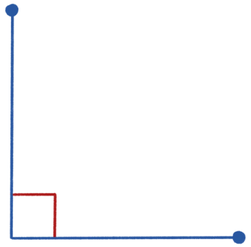
Shown below are the different types of angles:

Acute



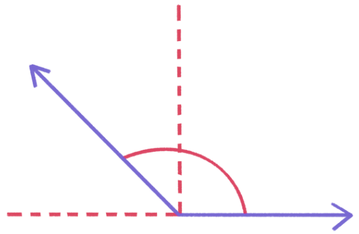
An angle less than 90°

Right angle



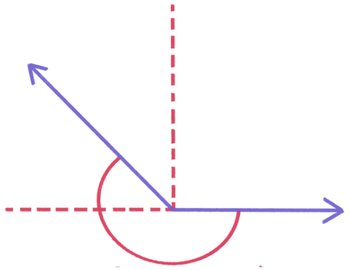
An angle that is exactly 90°

Obtuse



An angle that is between 90°and 180°

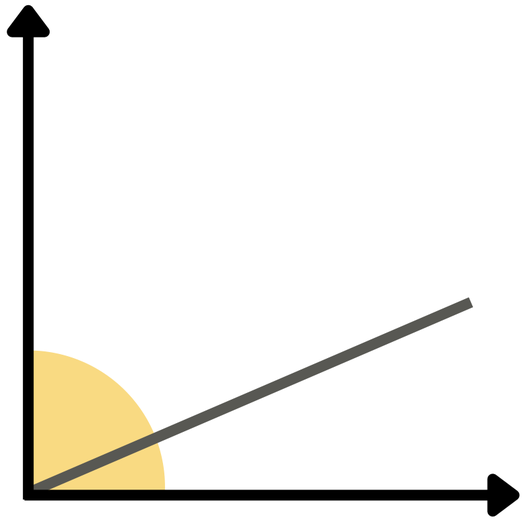
Reflex



An angle that is between 180°and 360°

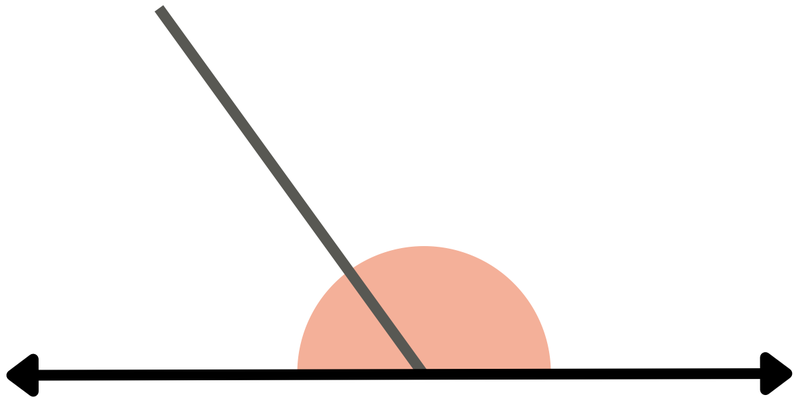
ANGLE FACTS REVIEW

Right Angles



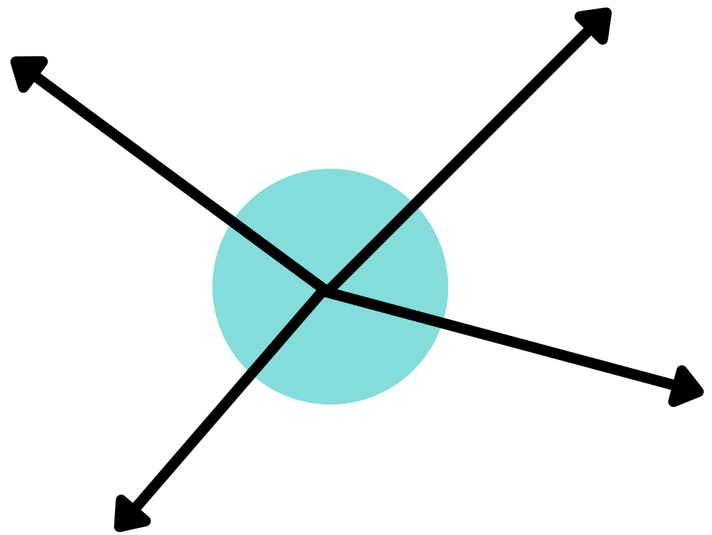
Angles in a right angle sum to 90°

Straight Line



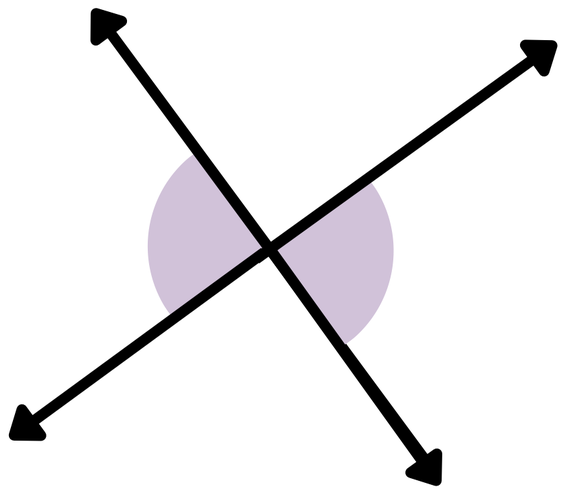
Adjacent angles on a straight line sum to 180°

At a Point



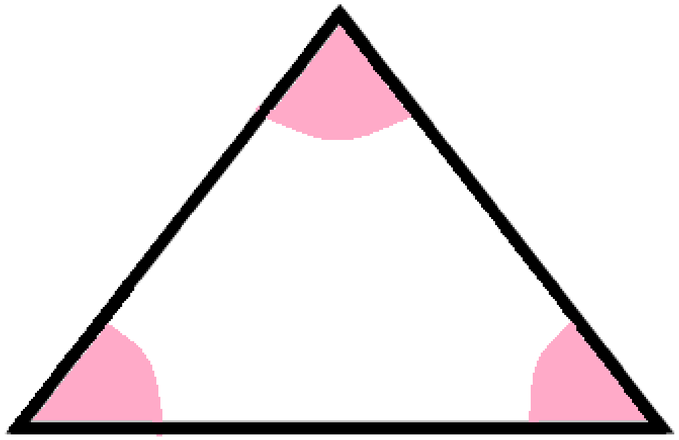
Angles at a point sum to 360°

Vertically Opposite



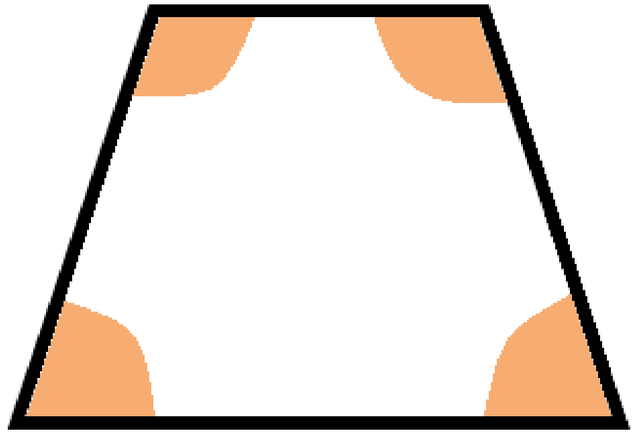
Vertically opposite angles are equal

Triangle



Angles in a triangle sum to 180°

Quadrilateral

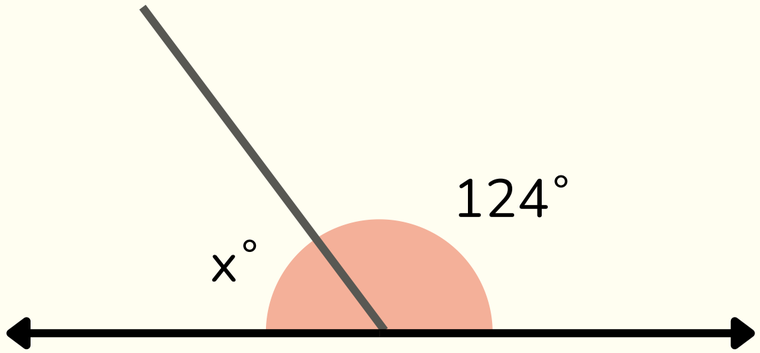


Angles in a quadrilateral sum to 360°

EXAMPLES

Find the missing angles, diagrams are not drawn accurately:

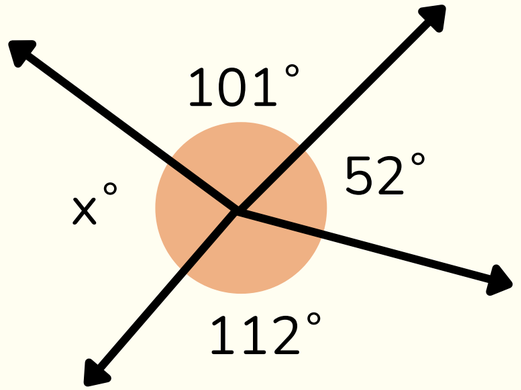
a)



180 - 124 = 56°

Adjacent angles on a straight line sum to 180°

b)



101 + 112 + 52 = 265°

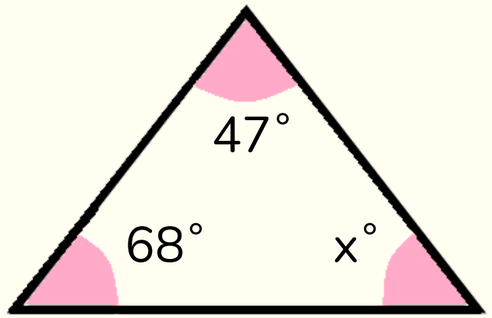
360 - 265 = 95°

Angles at a point sum to 360°

MORE EXAMPLES

Find the missing angles, diagrams are not drawn accurately:

a)

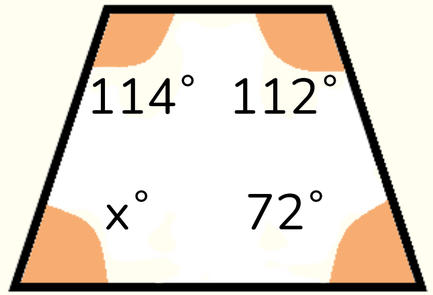


$68 + 47 = 115^\circ$

$180 - 115 = 65^\circ$

Angles in a triangle sum to 180°

b)



$114 + 112 + 72 = 298^\circ$

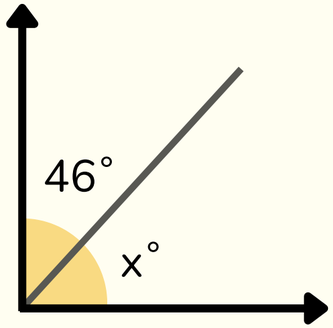
$360 - 298 = 62^\circ$

Angles in a quadrilateral sum to 360°

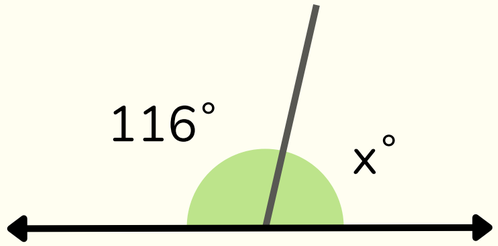
PRACTICE QUESTIONS

Find the missing angles, diagrams are not drawn accurately:

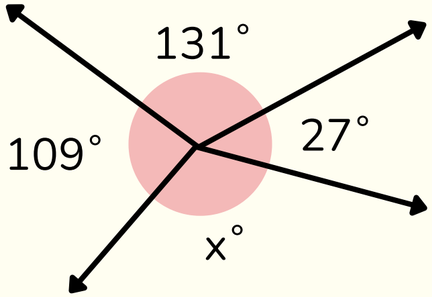
1.



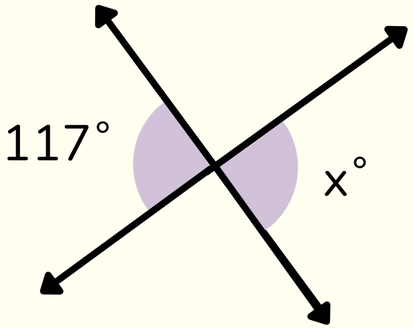
2.



3.

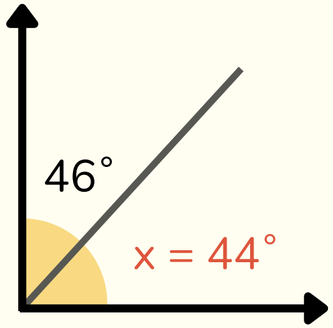


4.

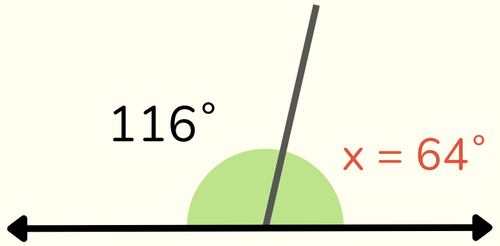


SOLUTIONS

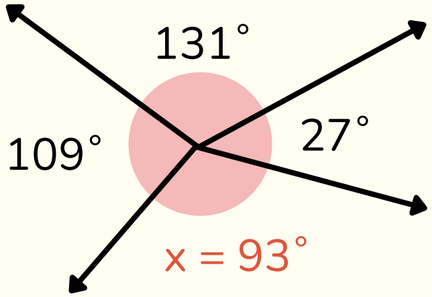
1.



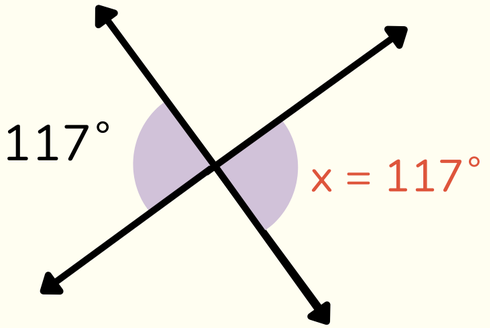
2.



3.



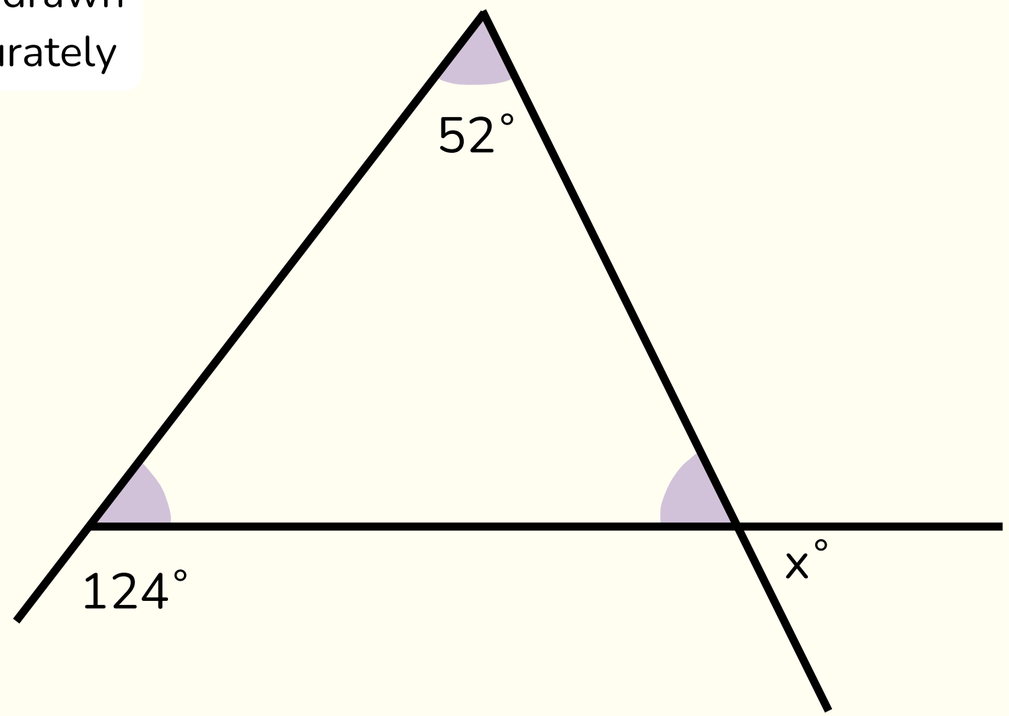
4.



COMPLEX ANGLE PROBLEMS

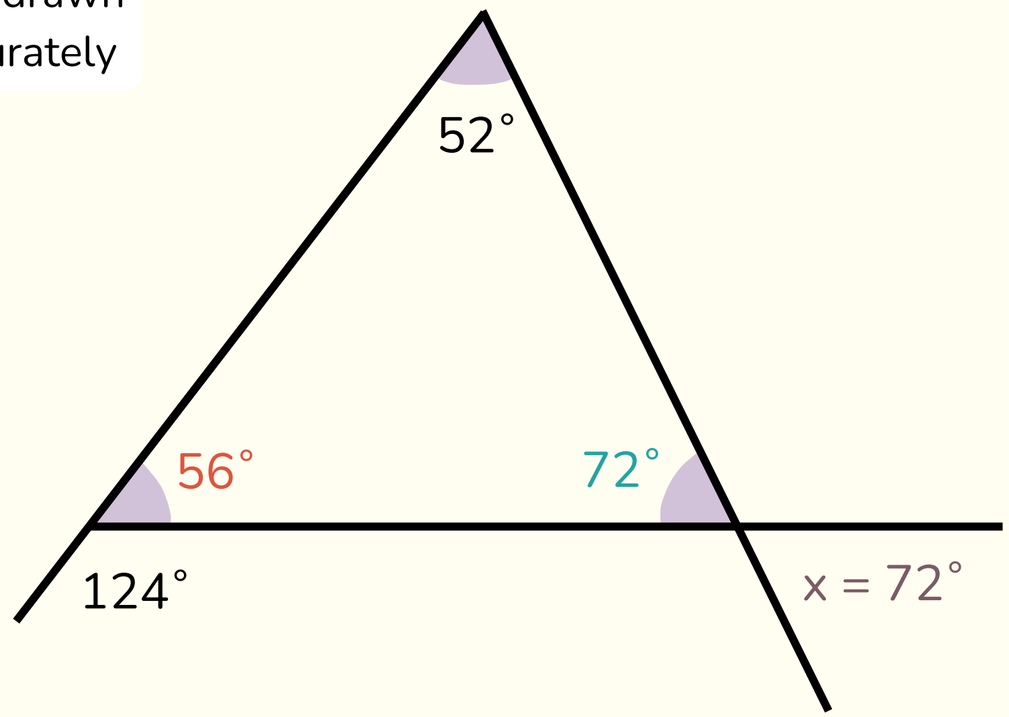
Find the missing angle x:

Not drawn accurately



COMPLEX ANGLE PROBLEMS

Not drawn accurately



Find the missing angle x:

180 - 124 = 56°
Adjacent angles on a straight line sum to 180°

56 + 52 = 108°
180 - 108 = 72°
Angles in a triangle sum to 180°

x = 72°
Vertically opposite angles are equal

ALL THE BEST !