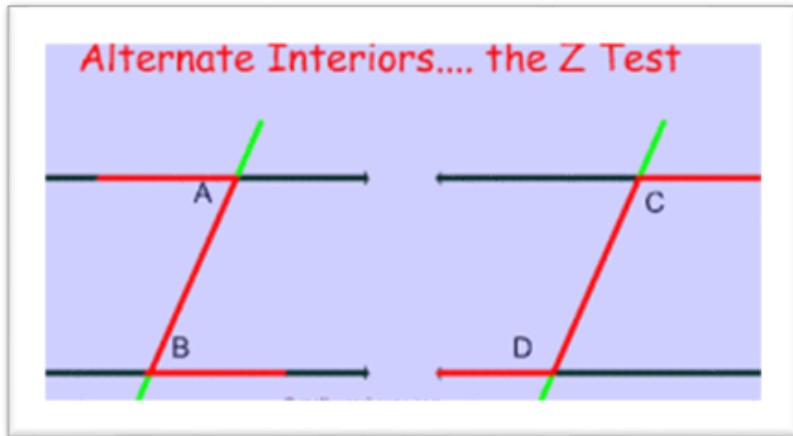


Challenge 3 Day 3: Solving Problems in Angles

Lines that cut across parallel sides (lines that are opposite and do not meet) form opposite angles that look like a Z shape. The opposite angles are equal. Sometimes it can look like a Z flipped the other way around.



Z

Z flipped

If angle A = 70 degrees, B would also be 70 degrees.

If angle C is 110 degrees, D would also be 110 degrees.

Have a go at the Guided Practice.

1. $m =$ $n =$
2. $p =$ $q =$

Guided Practice

1 Find $\angle m$ and $\angle n$.

The diagram shows a rectangle with a transversal line cutting through it. At the bottom-left corner, the angle between the transversal and the bottom side is labeled m . At the top-right corner, the angle between the transversal and the top side is labeled n . At the bottom-right corner, the angle between the transversal and the bottom side is labeled 65° . A thought bubble above the diagram shows a 'Z' shape formed by two parallel lines and a transversal, with two blue angles marked at the top and bottom vertices.

2 Find $\angle p$ and $\angle q$.

The diagram shows a rectangle with a transversal line cutting through it. At the top-left corner, the angle between the transversal and the top side is labeled 59° . At the bottom-left corner, the transversal extends downwards, forming an exterior angle labeled p and an interior angle labeled q . The bottom-right corner of the rectangle is marked with a right-angle symbol.

Things to remember:

Angles on a straight line = 180 degrees

Square in a corner represents a 90 degree angle

Angles in a quadrilateral = 360 degrees

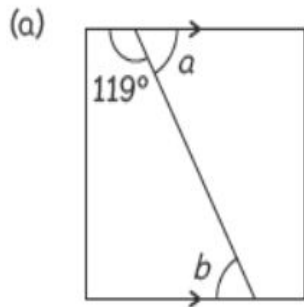
Angles that form a Z shape, the opposite angles are equal

A full turn = 360 degrees

Ch 3 Worksheet:

Solving Problems Involving Angles

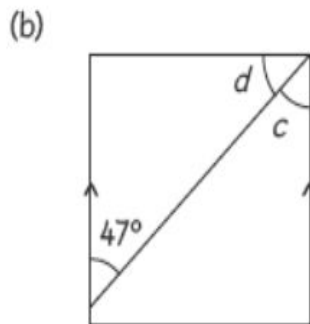
1 The diagrams below show rectangular sheets of paper that have been folded. Find the unknown angle in each diagram.



$\angle a =$

$\angle b =$

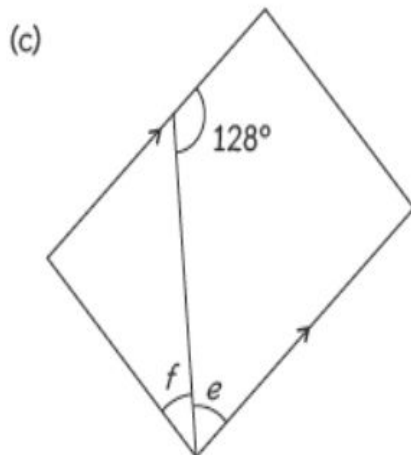
$a =$
 $b =$



$\angle c =$

$\angle d =$

$c =$
 $d =$

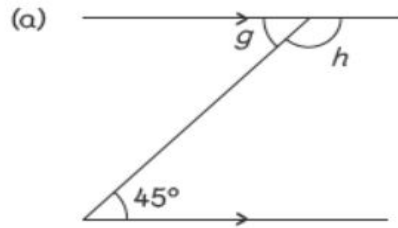


$\angle e =$

$\angle f =$

$e =$
 $f =$

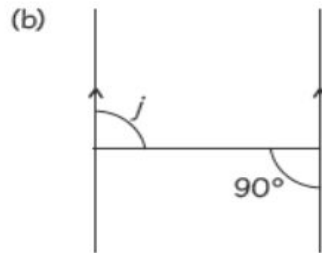
2 Find the unknown angles.



$\angle g =$

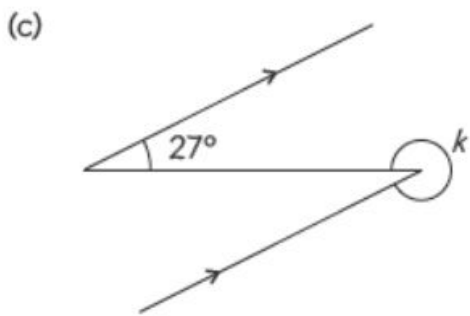
$g =$
 $h =$

$\angle h =$



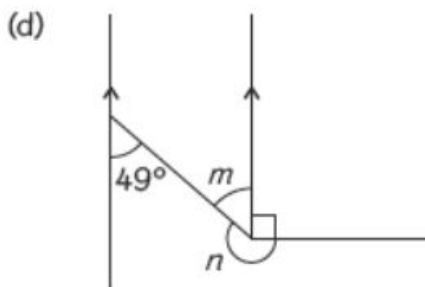
$\angle j =$

$j =$



$\angle k =$

$k =$



$\angle m =$

$m =$

$\angle n =$

$n =$