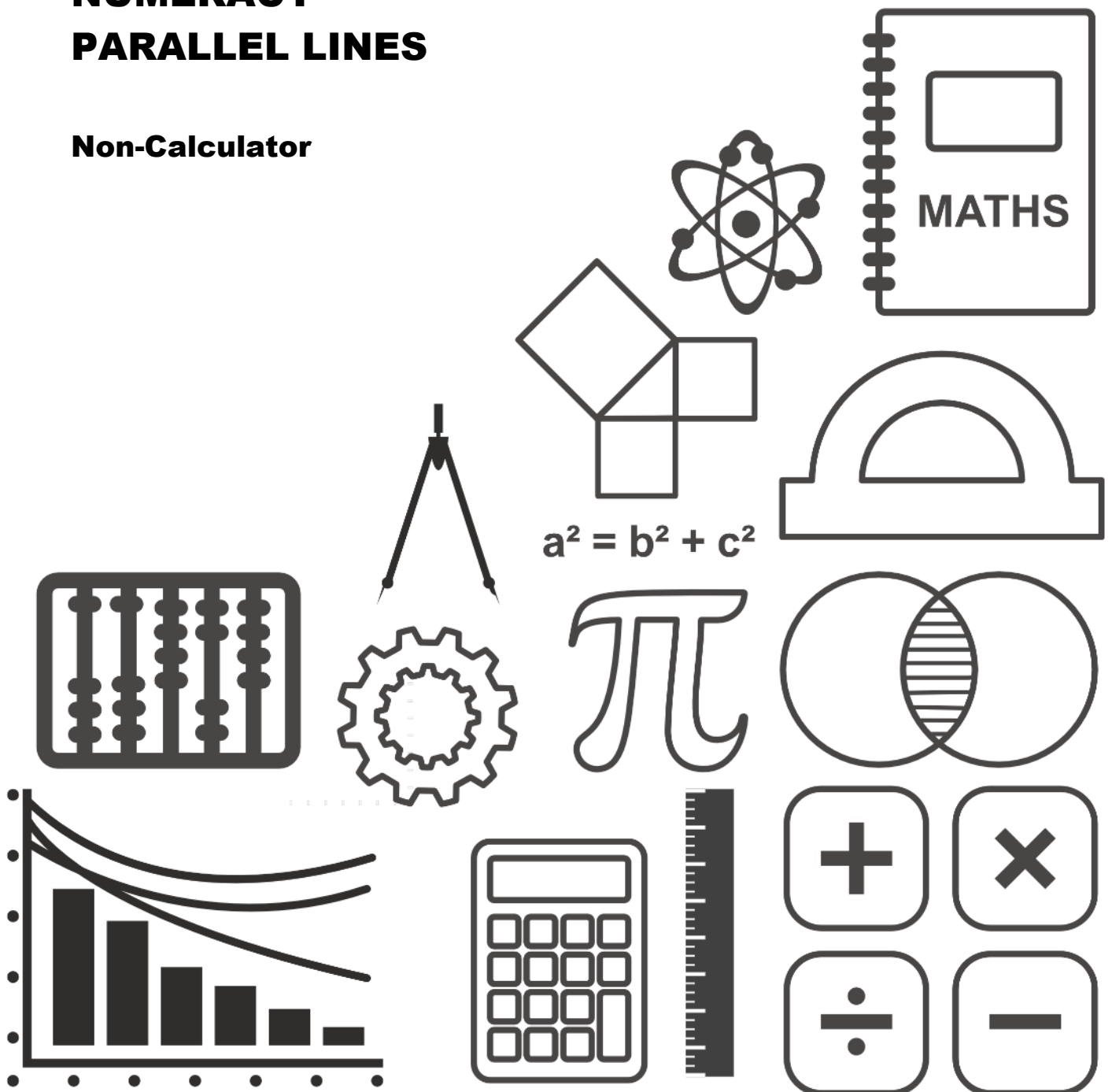


MATHSDIY

GCSE TOPIC BOOKLET NUMERACY PARALLEL LINES

Non-Calculator



1.

A new runway is to be built at an airport.

The plan below shows some of the angles.

Bryn has been asked to complete the plan by finding each of the missing angles, x , y and z .

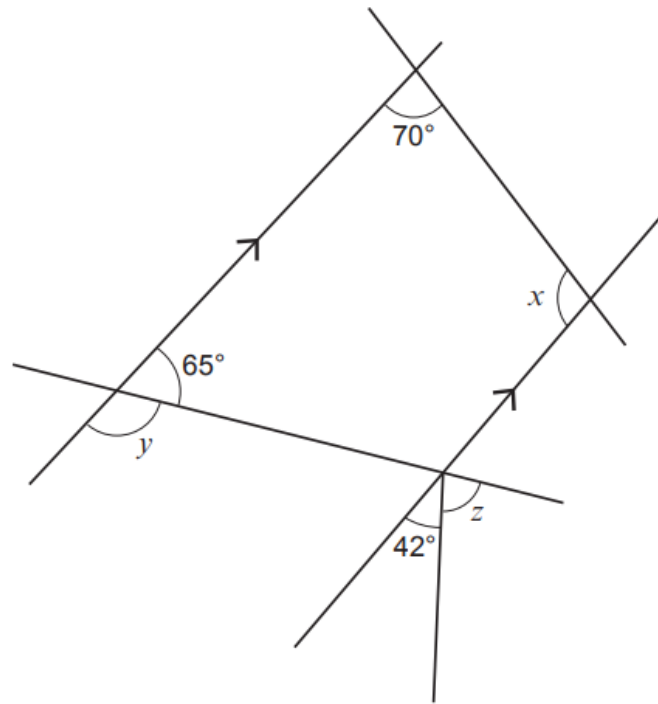


Diagram not drawn to scale

Calculate the size of each of the angles x , y and z .

[3]

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$x = \dots\dots\dots^\circ$ $y = \dots\dots\dots^\circ$ $z = \dots\dots\dots^\circ$

2. Yousef has a piece of wallpaper.

He wants to draw some of the leaves to create a different design to screen print.

Yousef draws lines on the wallpaper.
Some of the lines are parallel.
He measures four angles and needs to calculate four more.



Diagram not drawn to scale

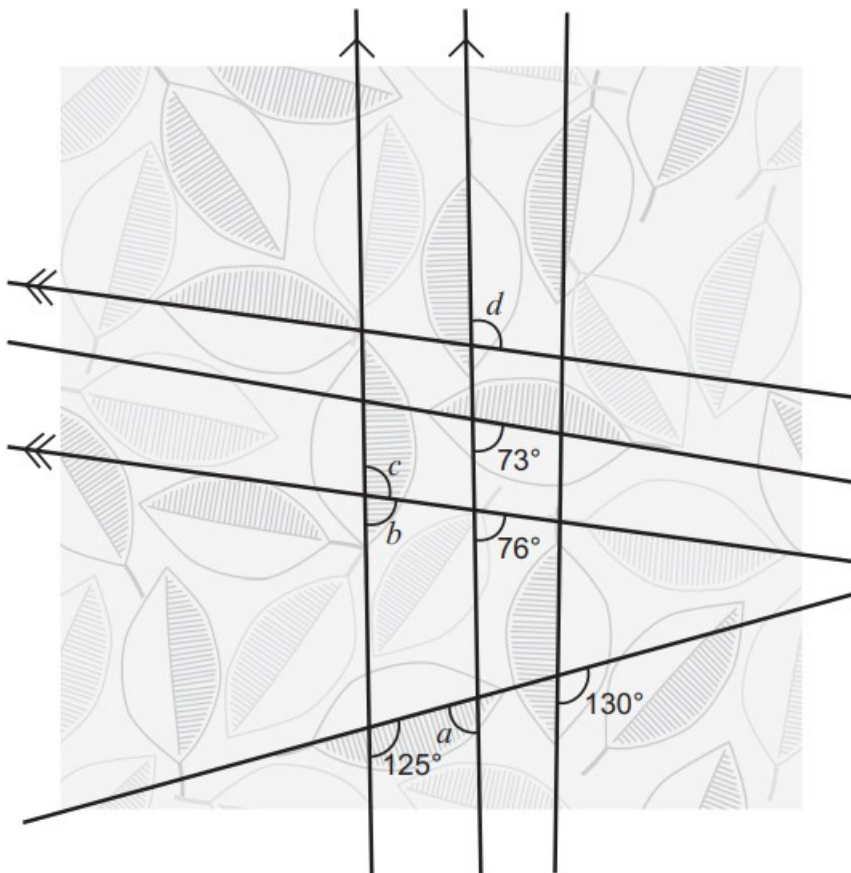


Diagram not drawn to scale

Find the size of each of the angles a , b , c and d .

[4]

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$a = \dots\dots\dots^\circ$ $b = \dots\dots\dots^\circ$ $c = \dots\dots\dots^\circ$ $d = \dots\dots\dots^\circ$

3. A number of paths are to be laid to join three new office buildings. A sketch of the architect's plan is shown below.

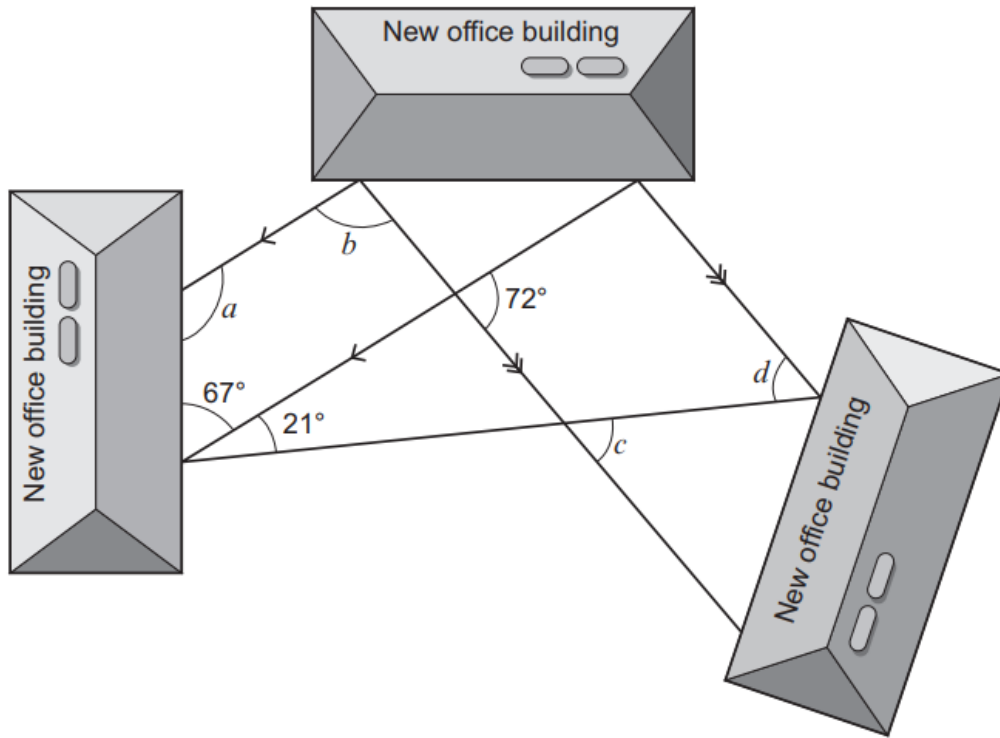


Diagram not drawn to scale

The architect has shown a number of the angles in his planning for the new paths.

Calculate the size of each of the angles a , b , c and d .

[4]

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$a = \dots\dots\dots^\circ$ $b = \dots\dots\dots^\circ$ $c = \dots\dots\dots^\circ$ $d = \dots\dots\dots^\circ$

4. Kari is making a jigsaw puzzle.
 She has designed the pattern on a piece of paper.
 Kari plans to make each piece of the jigsaw a different colour.

Part of her plan is shown below.

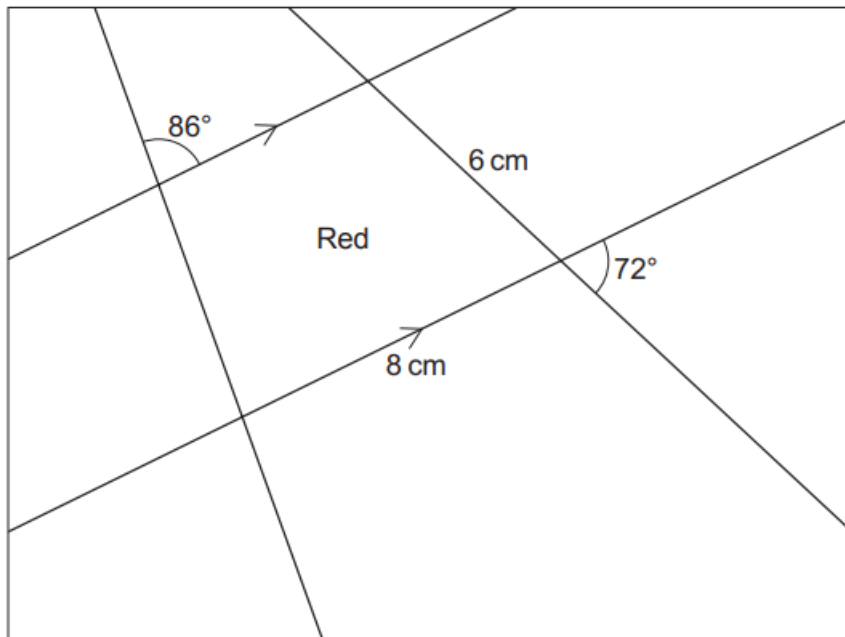


Diagram not drawn to scale

Kari now sketches a diagram of the red piece of the jigsaw, which is shown below.
 She shows some extended lines and indicates all the angles she needs to find.

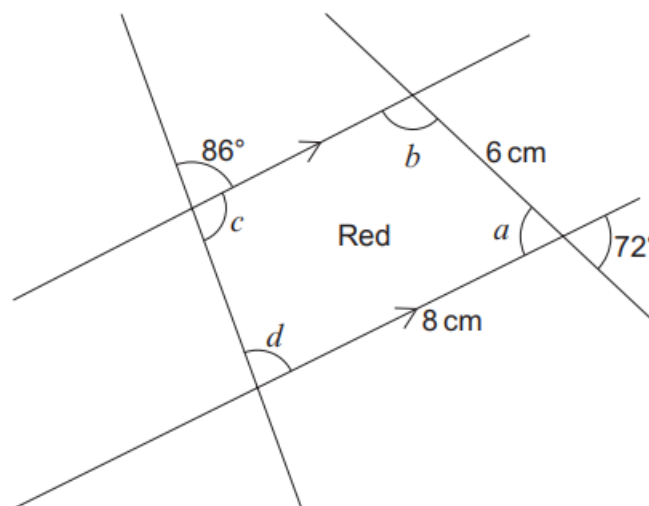


Diagram not drawn to scale

Find the 4 missing angles in the red piece of the jigsaw.
 Draw the red piece of Kari's jigsaw accurately.
 One side has been drawn for you.

[6]

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$a = \dots\dots\dots^\circ$, $b = \dots\dots\dots^\circ$, $c = \dots\dots\dots^\circ$, $d = \dots\dots\dots^\circ$

Space for drawing the red piece of jigsaw:

