Angles (Triangles and Polygons) Worksheet
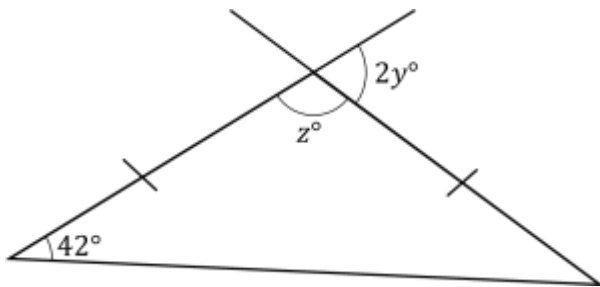
Q1.

Work out the size of the angle marked x.
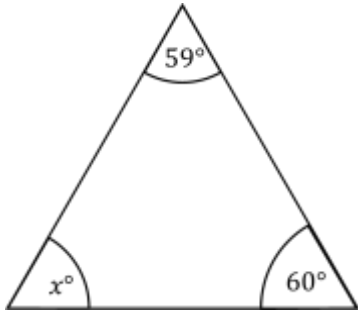
.........................[2]

Q2.

Find the value of the angle marked z.

.........................[2]

Find the value of the angle marked y.

.........................[2]

Q3.

Calculate the value of y.
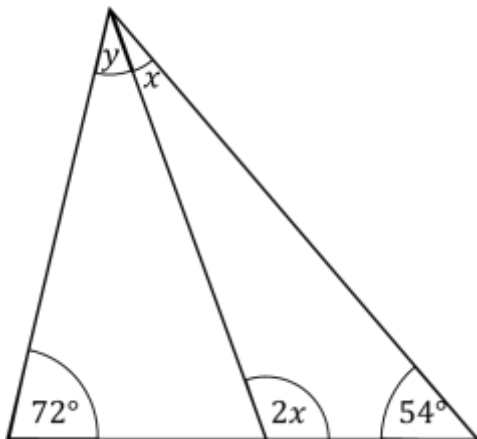
.........................[3]

Q4.

Work out the size of angle JKL and comment on the triangle formed.
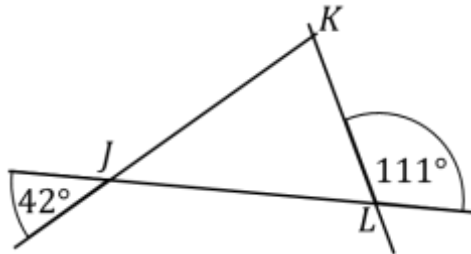
....[3]

Q5.

Find the value of x.
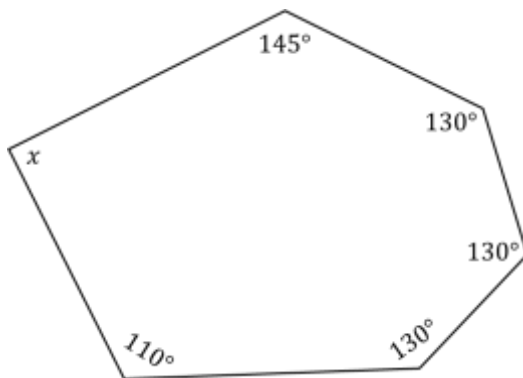
...........................[2]

Q6.

Calculate the interior angle of a regular nonagon.

...........................[2]

Q7.

A regular shape has an interior angle of 156°. How many sides does the shape have?

...........................[2]

Q8. AO2

Benny is upcycling a regular hexagonal dining table. He cuts the table in half from a vertex on the table and needs to know the size of each of the angles on the table top.
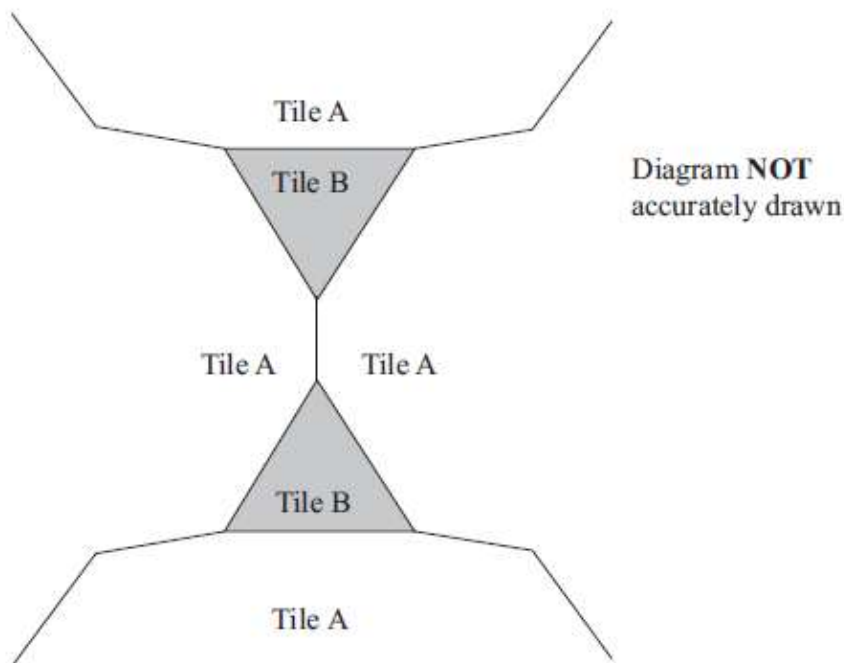
What are the sizes of the angles?

What shape is the table top?

………[2]

Q9. AO3

The diagram shows part of a pattern made from tiles.

Tile A

Tile B

Diagram **NOT** accurately drawn

Tile A   Tile A

Tile B

Tile A

The pattern is made from two types of tiles, tile A and tile B.
Both tile A and tile B are regular polygons.
Work out the number of sides tile A has.

……………………[4]

Answers

Q1.

61 degrees

Q2.

Z = 96 degrees and y = 42 degrees

Q3.

Y = 12 degrees (x = 42 degrees)

Q4.

Angle JKL = 69 degrees. This creates an isosceles triangle

Q5.

75 degrees (720 – 645)

Q6.

140 degrees

Q7.

15 sides

Q8.

120, 120, 60, 60 Isosceles trapezium

Q9.

12 sides (draw line of symmetry down tile b to find exterior angle of tile a = 30 degrees)