1. $x=72°$ (The sum of the angles in a triangle is $180°$)

1. $x=102°$ (The sum of the angles in a quadrilateral is $360°$)
2. $x=62°$ ($x$ and $118°$ angle are supplementary)

$y=79°$ (The exterior angle is equal to the sum of the two interior and opposite angles)

1. $x=85°$ (The exterior angles of a triangle add to $360°$)
2. $x=35°$ (The exterior angles of a quadrilateral add to $360°$)
3. $x = 60°$ (The exterior angles of a regular polygon are all equal and add up to $360°$)
4. $x=50°$ ($x$ and $50°$ angle are the angles opposite equal sides in an isosceles triangle)

$y=25°$ ($x$ is the exterior angle of triangle ABC, so y and angle *A* must add to $50°$. $y$

 and ∠$A$ are equal because they are opposite equal sides in an isosceles triangle)

1. $a=120°$ (AABE is equilateral, so all of the angles in it are $60°$. ∠ABE and $a$ are supplementary.
2. $b=120°$ (AABE is equilateral, so tall f the angles in it are $60°$. ∠AEB and $b$ are supplementary.
3. $c=131°$ ($c$ is an exterior angle of a triangle and is equal to the sum of the two interior and opposite angles in the triangle)

2.

1. $x=107.5°$ b. $x=91°$

$67.5°$, $107.5°$, $77.5°$, $107.5°$ $86°$, $95°$, $81°$, $98°$

3. 11.9 $m$

4. The sum of the angles in a triangle is $180°$. There are $4$ triangles in the quadrilateral, so the sum of all of the angles is $4×180°$ or $720°$. The $4$ angles at the center of the quadrilateral add to $360°$ (they make a circle). Subtract the angles at the center from the sum of all of the angles to give the sum of the interior angles of the quadrilateral.

5. The sum of the angles in a triangle is $180°$ and there are $5$ triangles for a total of $900°$. The base angles in the triangles are also exterior angles of the pentagon and the sum of exterior angles of a polygon is $360°$. There are two sets of exterior angles (clockwise and counterclockwise), so all of the exterior angles (base angles of the triangles) add to $720°$. Subtract the sum of the base angles from the sum of all of the angles in the triangles to get the sum of the angles at the points.