Vertical Angles are the angles opposite each other when two lines cross In this example, $a^{\circ}$ and $b^{\circ}$ are vertical angles.

The interesting thing here is that vertical angles are equal:
$a^{\circ}=b^{\circ}$
(in fact they are congruent angles)


Have a play with them yourself, notice how the 4 angles are actually two pairs of "vertical angles":


