



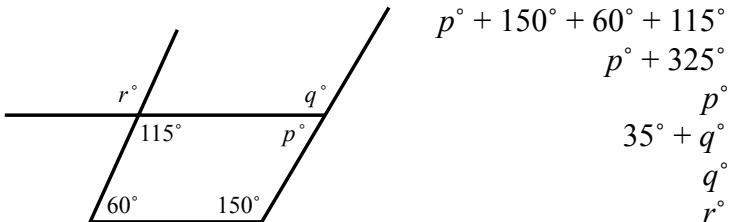
Angle Properties 3



G). Angle Sum of a Quadrilateral

The interior angles of a quadrilateral add up to 360°

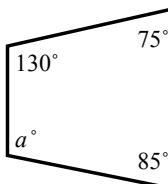
E.g. From the diagram find p , q and r .



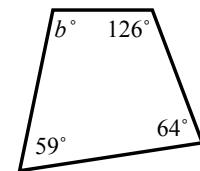
$$\begin{aligned}
 p^\circ + 150^\circ + 60^\circ + 115^\circ &= 360^\circ \text{ (Angle Sum of a Quadrilateral)} \\
 p^\circ + 325^\circ &= 360^\circ \\
 p^\circ &= 35^\circ \\
 35^\circ + q^\circ &= 180^\circ \text{ (Angles on straight line)} \\
 q^\circ &= 145^\circ \\
 r^\circ &= 115^\circ \text{ (Vertically opposite angles).}
 \end{aligned}$$

Find the size of the angles marked by letters in each diagram. Give a reason for each angle found. (**Diagrams not to scale**).

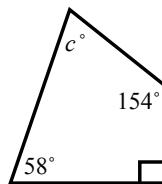
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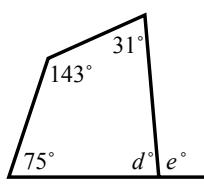
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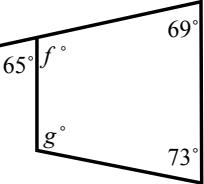
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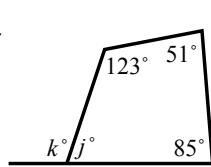
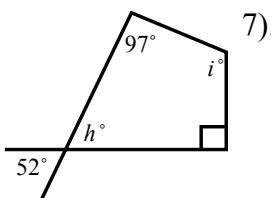
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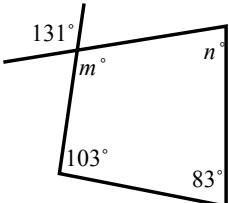
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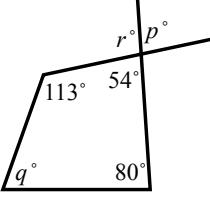
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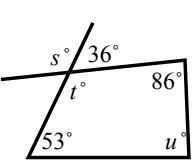
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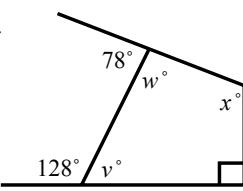
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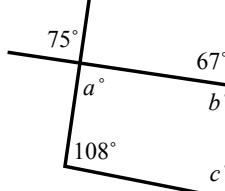
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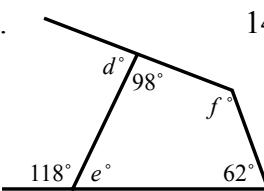
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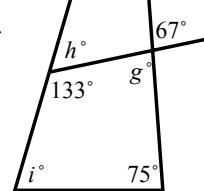
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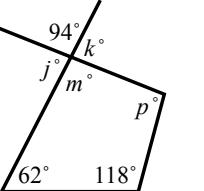
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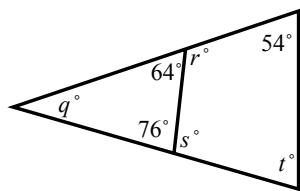
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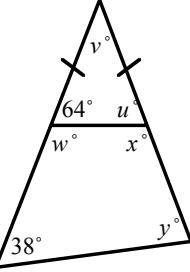
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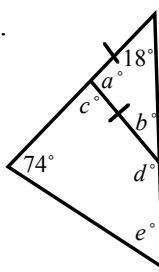
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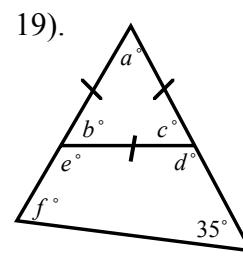
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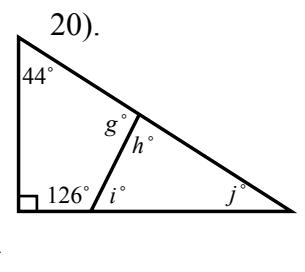
18).



19).



20).

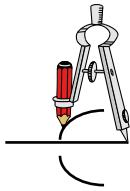


H). Constructions

The Perpendicular Bisector. This construction will bisect (cut in half) a line.

The construction is perpendicular (at right angles) to the line.

1).



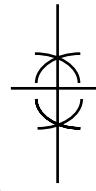
Put a compass on one end of the line. Draw an arc above and below the line.

2).



Keep the compass open at the same distance. Now place it at the other end of the line and repeat step 1.

3).



Where these arcs cross, join them up. This is the perpendicular bisector.