1) Using the picture below, identify the letter that matches with angle $\mathbf{d}$ to make a pair of alternate angles

2) Find the value of $a$, giving a reason for your answer.

3) Using the picture below, identify the letter that matches with angle $\mathbf{d}$ to make a pair of co-interior angles

4) Find the value of $a$, giving a reason for your answer.

5) Using the picture below, identify the letter that matches with angle $\mathbf{d}$ to make a pair of corresponding angles

6) Find the value of $a$, giving a reason for your answer.

7) In the following diagram, AB is parallel to DE . Angle $\mathrm{ACB}=69^{\circ}$ and angle $\mathrm{CED}=52^{\circ}$.

Find the missing angles $\mathrm{CAB}, \mathrm{ABE}$ and CDE .

8) In the following diagram, DE is parallel to FG . Angle $\mathrm{ABC}=70^{\circ}$ and angle $\mathrm{ACB}=47^{\circ}$.

Find the missing angles DBA, EBC and FAB.

9) In the following diagram, BDF is parallel to EG and AB is parallel to CDE.

Given that angle $\mathrm{ABD}=51^{\circ}$, find angle BDC and angle DEG.


Solutions for the assessment Parallel Line Rules

1) f
2) $a=133^{\circ}$ (Corresponding angles are equal)
3) e
4) $a=55^{\circ}$ (Alternate angles are equal)
5) h
6) $a=142^{\circ}\left(\right.$ Co-interior angles sum to $\left.180^{\circ}\right)$
7) angle $\mathrm{CAB}=59^{\circ}$, angle $\mathrm{ABE}=128^{\circ}$, angle $\mathrm{CDE} \mathrm{8)}$ angle $\mathrm{DBA}=63^{\circ}$, angle $\mathrm{EBC}=47^{\circ}$, angle FAB $=59^{\circ}$ $=117^{\circ}$
8) angle $\mathrm{BDC}=129^{\circ}$, angle $\mathrm{DEG}=51^{\circ}$
