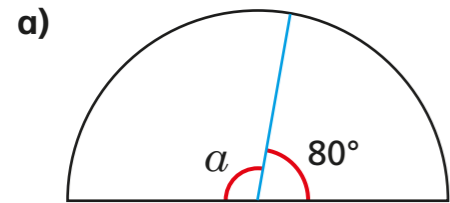
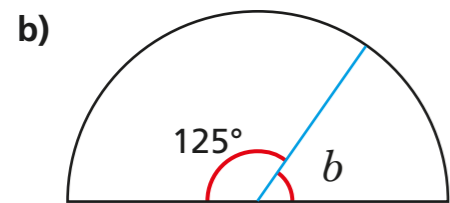


Calculating angles on a straight line

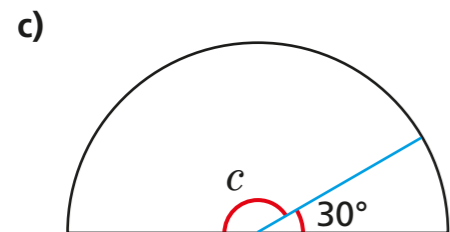
1 Work out the sizes of the unknown angles.



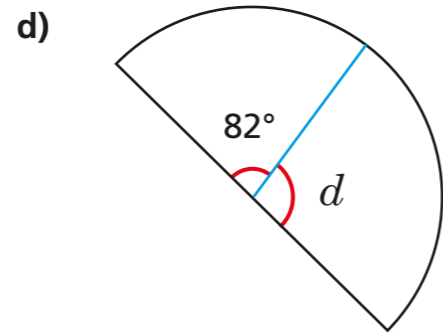
$a = \boxed{100}^\circ$



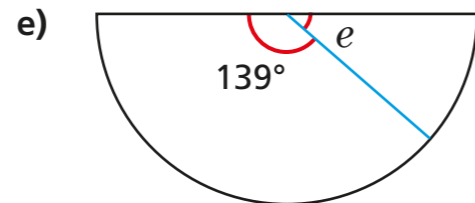
$b = \boxed{55}^\circ$



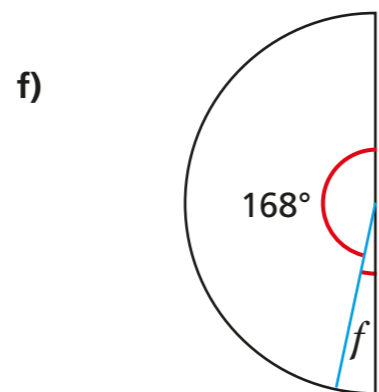
$c = \boxed{150}^\circ$



$d = \boxed{98}^\circ$

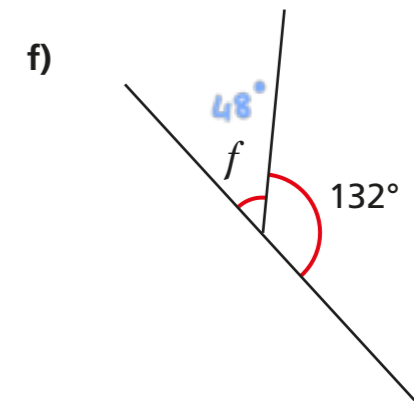
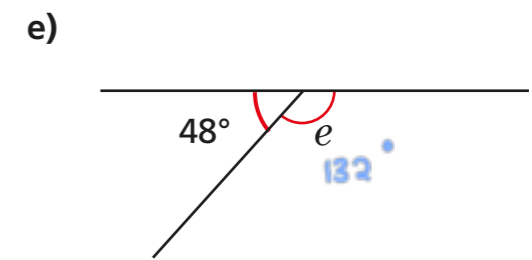
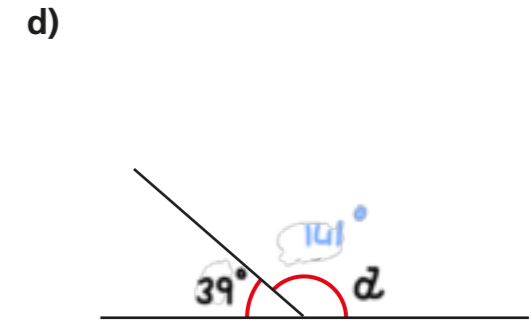
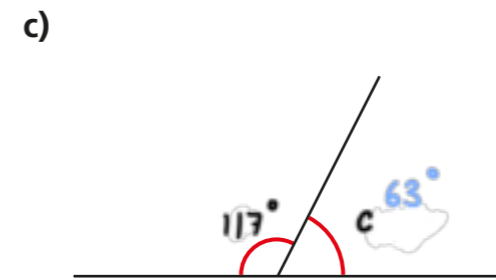
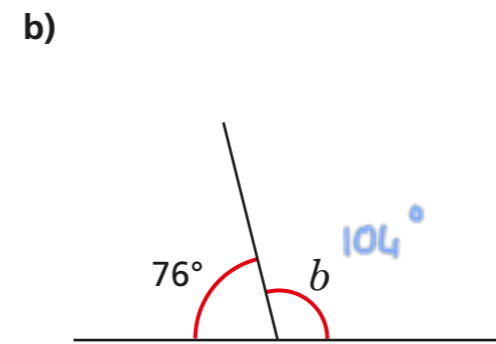
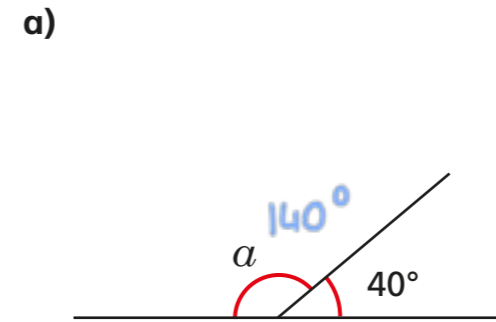


$e = \boxed{41}^\circ$

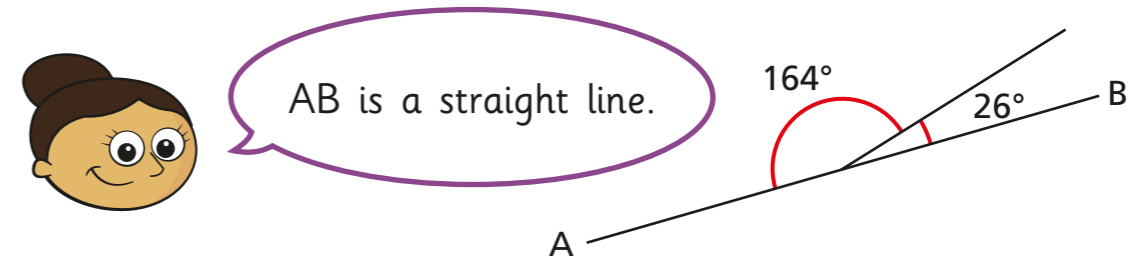


$f = \boxed{12}^\circ$

2 Work out the size of the unknown angles.



3 Dora draws two angles.



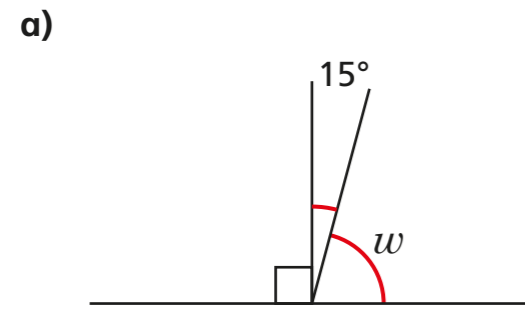
Do you agree with Dora? No

Explain your answer.

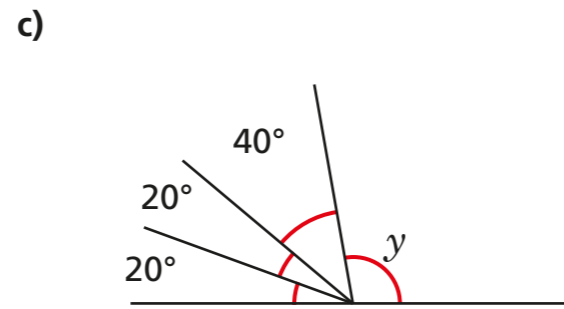


4 Work out the size of the unknown angles.

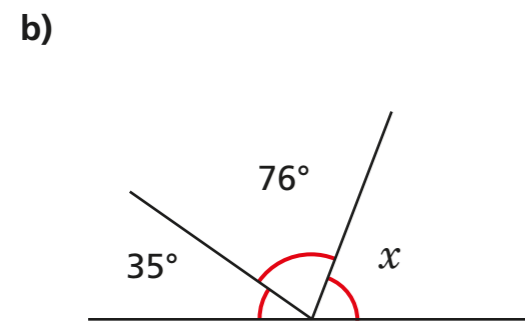
Show the steps in your working.



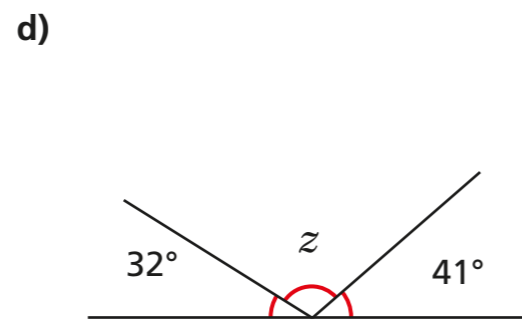
$$w = \boxed{75}^\circ$$



$$y = \boxed{100}^\circ$$

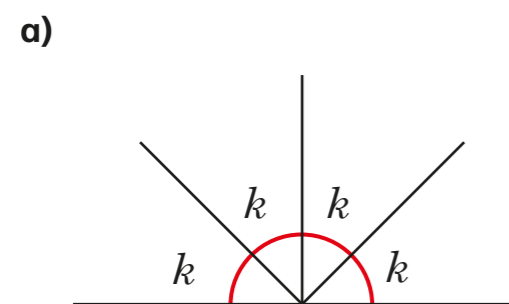


$$x = \boxed{69}^\circ$$

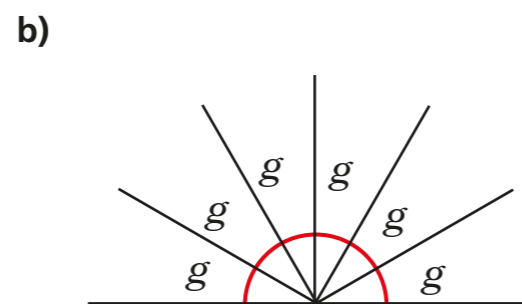


$$z = \boxed{107}^\circ$$

5 Work out the sizes of the unknown angles.

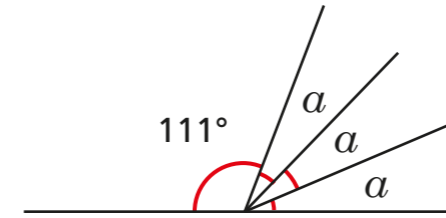


$$k = \boxed{45}^\circ$$



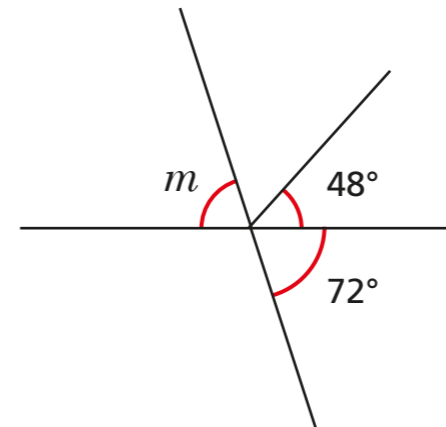
$$g = \boxed{30}^\circ$$

6 Work out the size of angle a .



$$a = \boxed{23}^\circ$$

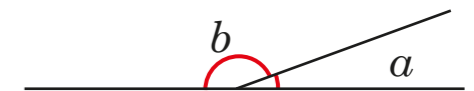
7 Work out the size of angle m .
Show all your working out.



$$m = \boxed{72}^\circ$$

8 Two angles are marked.

Angle b is eight times the size of angle a .
What is the size of each angle?



$$a = \boxed{20}^\circ \quad b = \boxed{160}^\circ$$