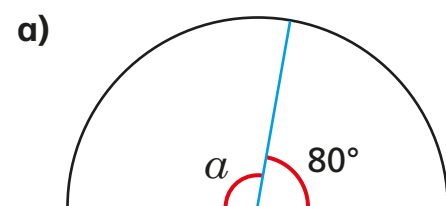
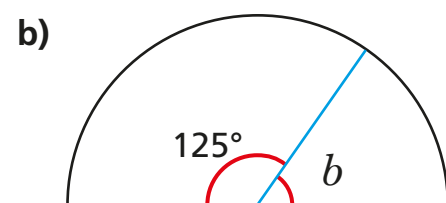


Calculating angles on a straight line

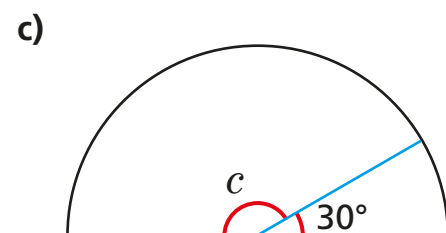
1 Work out the sizes of the unknown angles.



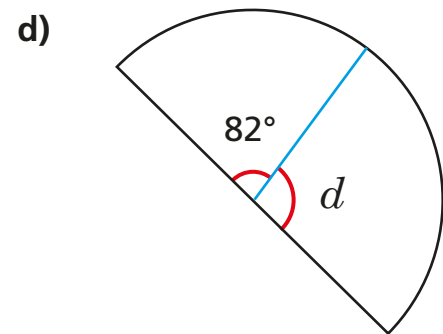
$$a = \boxed{100}^{\circ}$$



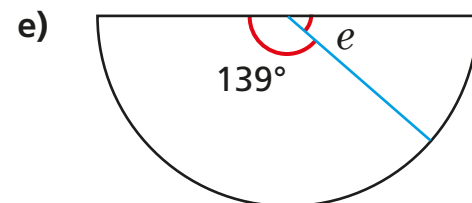
$$b = \boxed{55}^{\circ}$$



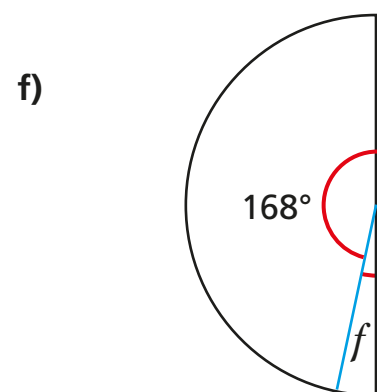
$$c = \boxed{150}^{\circ}$$



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



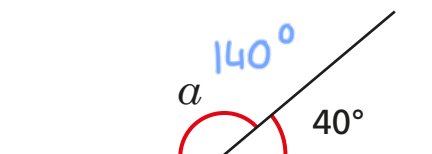
$$e = \boxed{41}^{\circ}$$



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

2 Work out the size of the unknown angles.

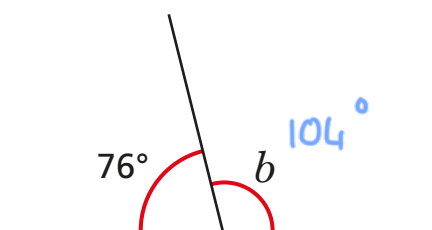
a)



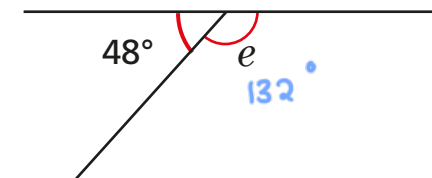
d)



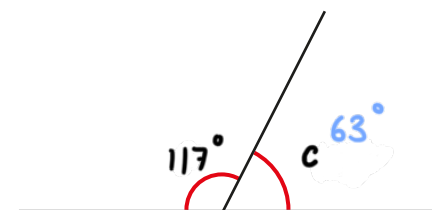
b)



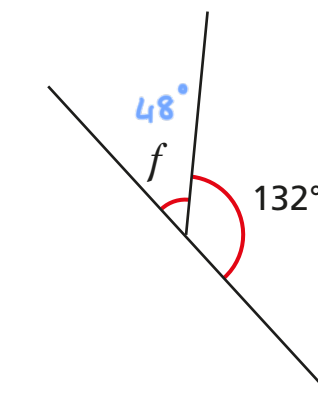
e)



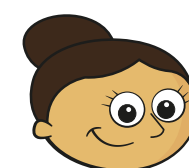
c)



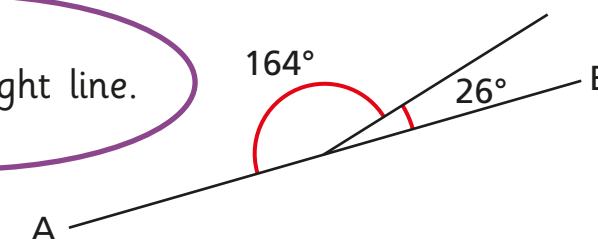
f)



3 Dora draws two angles.



AB is a straight line.

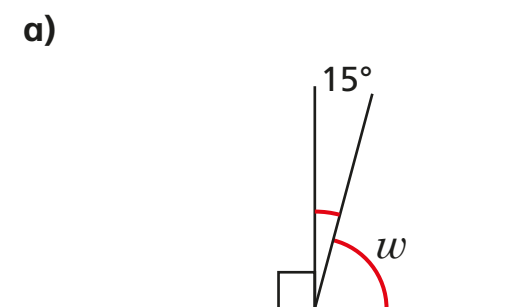


Do you agree with Dora? No

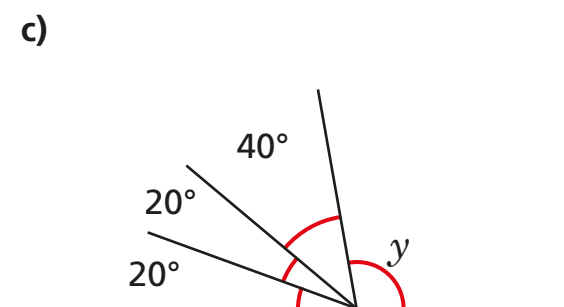
Explain your answer.

4 Work out the size of the unknown angles.

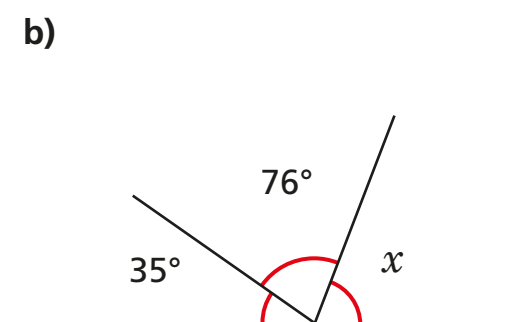
Show the steps in your working.



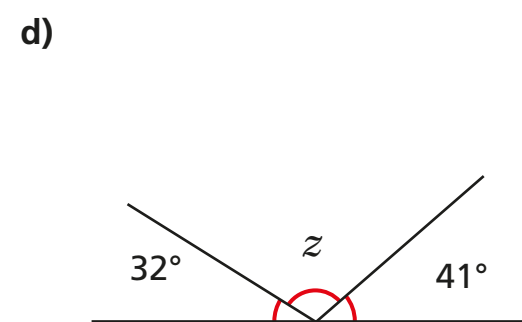
$$w = \boxed{75}^{\circ}$$



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

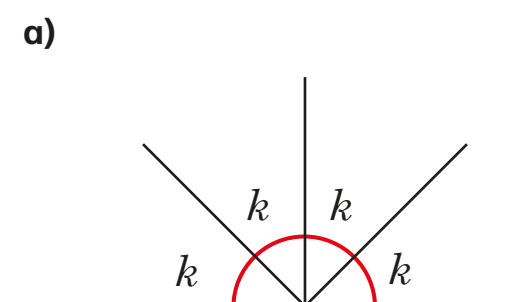


$$x = \boxed{69}^{\circ}$$

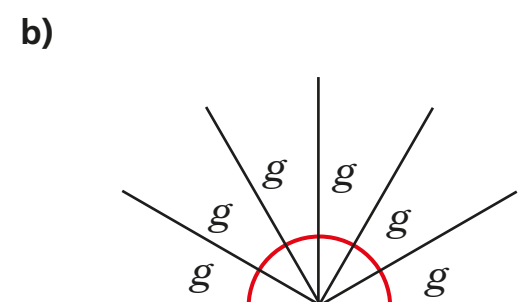


$$z = \boxed{107}^{\circ}$$

5 Work out the sizes of the unknown angles.

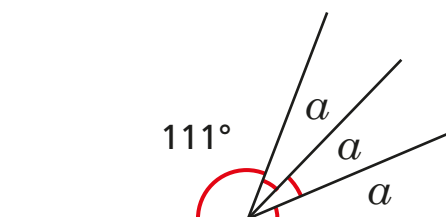


$$k = \boxed{45}^{\circ}$$



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

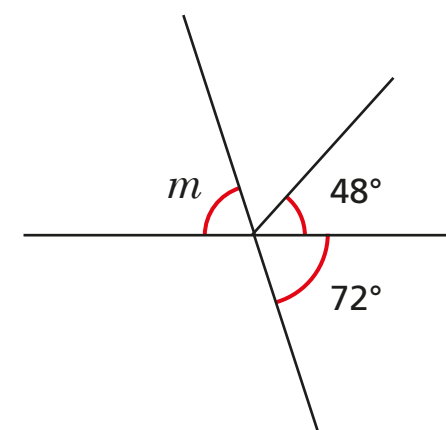
6 Work out the size of angle α .



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

7 Work out the size of angle m .

Show all your working out.

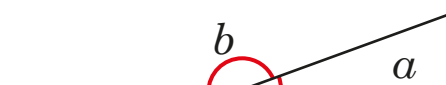


$$m = \boxed{72}^{\circ}$$

8 Two angles are marked.

Angle b is eight times the size of angle a .

What is the size of each angle?



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