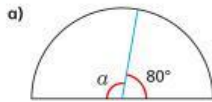
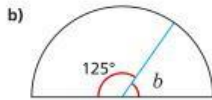


## Calculating angles on a straight line

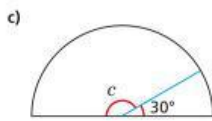
1 Work out the sizes of the unknown angles.



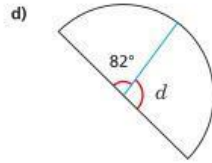
$a = \boxed{\phantom{00}}^\circ$



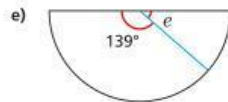
$b = \boxed{\phantom{00}}^\circ$



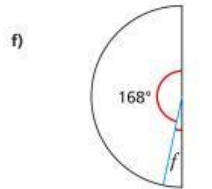
$c = \boxed{\phantom{00}}^\circ$



$d = \boxed{\phantom{00}}^\circ$

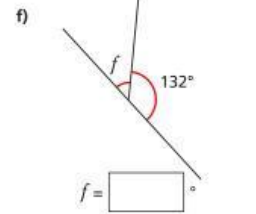
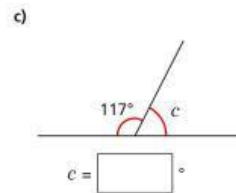
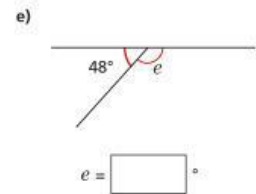
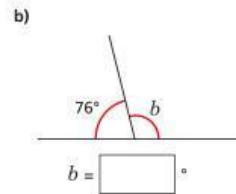
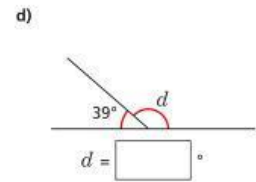
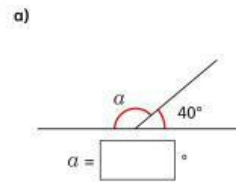


$e = \boxed{\phantom{00}}^\circ$

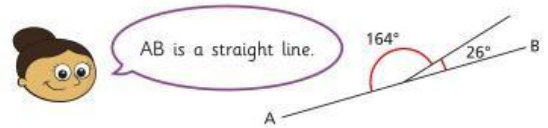


$f = \boxed{\phantom{00}}^\circ$

2 Work out the size of the unknown angles.



3 Dora draws two angles.



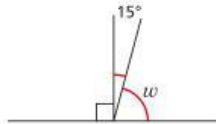
Do you agree with Dora? \_\_\_\_\_

Explain your answer.

- 4 Work out the size of the unknown angles.

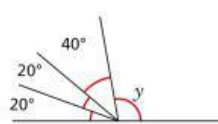
Show the steps in your working.

a)



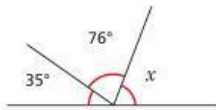
$$w = \boxed{\phantom{00}}^\circ$$

c)



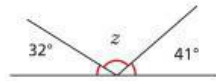
$$y = \boxed{\phantom{00}}^\circ$$

b)



$$x = \boxed{\phantom{00}}^\circ$$

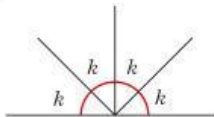
d)



$$z = \boxed{\phantom{00}}^\circ$$

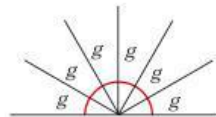
- 5 Work out the sizes of the unknown angles.

a)



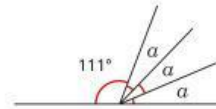
$$k = \boxed{\phantom{00}}^\circ$$

b)



$$g = \boxed{\phantom{00}}^\circ$$

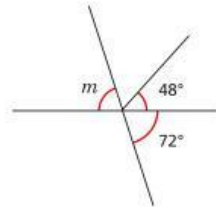
- 6 Work out the size of angle  $\alpha$ .



$$\alpha = \boxed{\phantom{00}}^\circ$$

- 7 Work out the size of angle  $m$ .

Show all your working out.

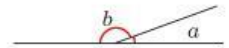


$$m = \boxed{\phantom{00}}^\circ$$

- 8 Two angles are marked.

Angle  $b$  is eight times the size of angle  $a$ .

What is the size of each angle?



$$a = \boxed{\phantom{00}}^\circ \quad b = \boxed{\phantom{00}}^\circ$$