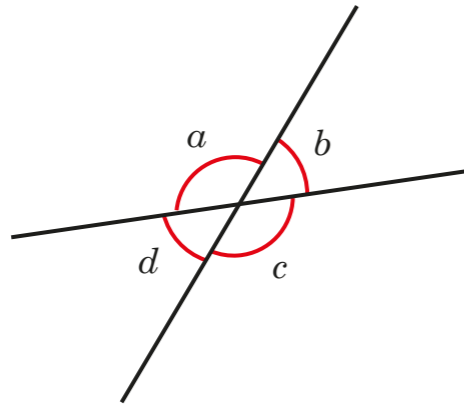


Understand and use the equality of vertically opposite angles

1 The diagram shows four angles around a point.



a) What is the sum of all four angles?
How do you know?

b) Which pairs of angles sum to 180° ?

How do you know?

c) Which pairs of angles are equal?

How do you know?

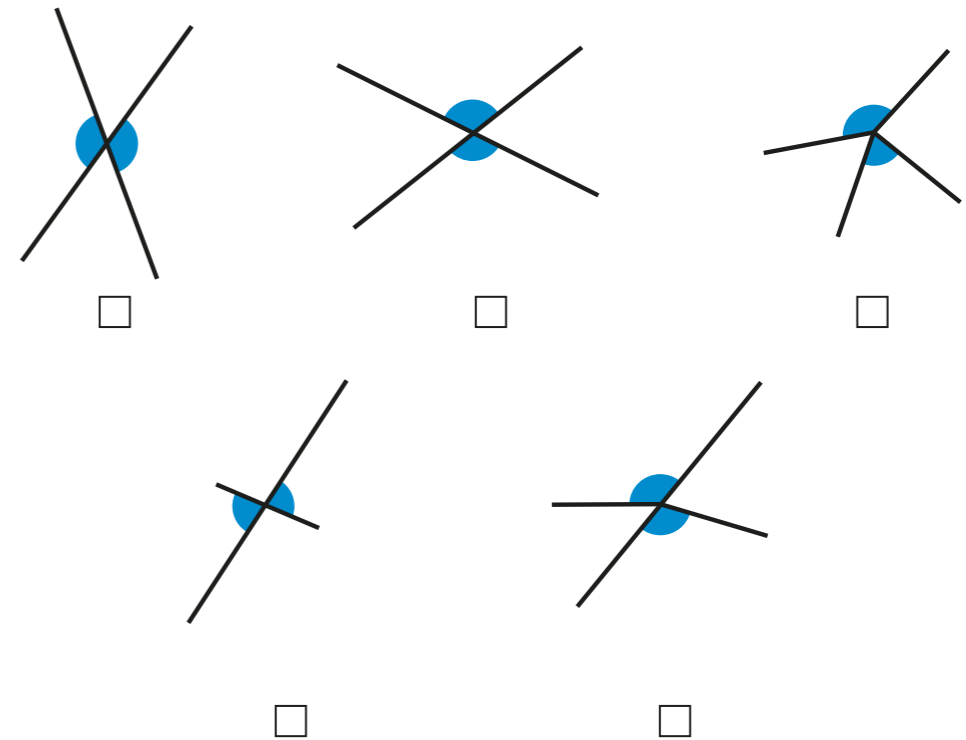
d) Complete the sentences.

Angles round a point _____

Adjacent angles on a straight line _____

Vertically opposite angles _____

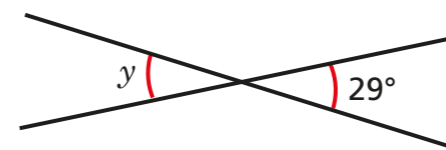
2 Tick the pairs of angles that are vertically opposite.



Compare answers with a partner.

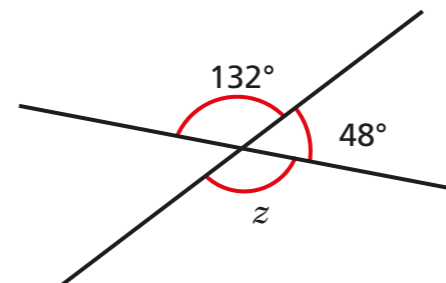
3 Work out the sizes of the unknown angles.
Give reasons for your answers.

a)



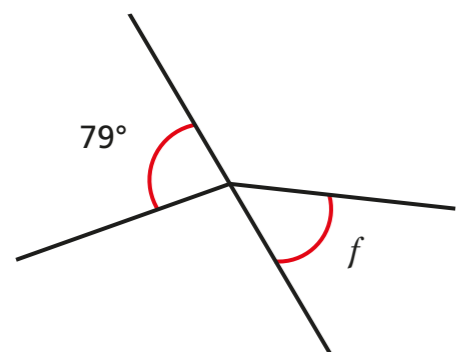
$y =$ because _____

b)



$z =$ because _____

- 4 Whitney is working out the size of angle f .



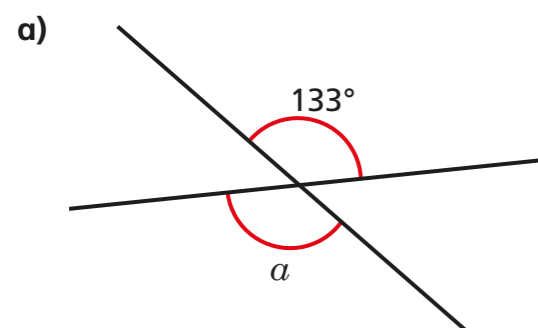
Angle f is equal to 79° because vertically opposite angles are equal.



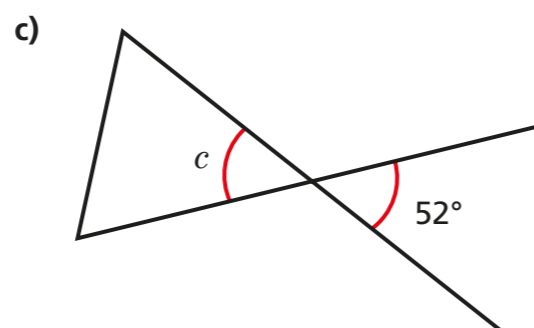
Do you agree with Whitney? _____

Explain your answer.

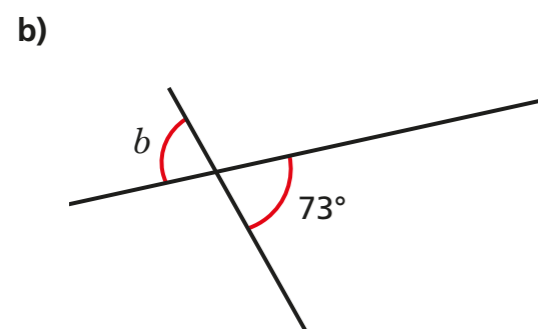
- 5 Work out the unknown angles.



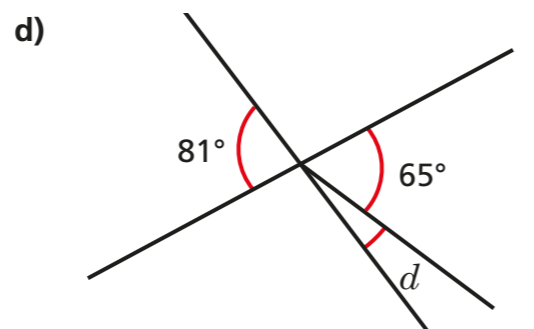
$a =$



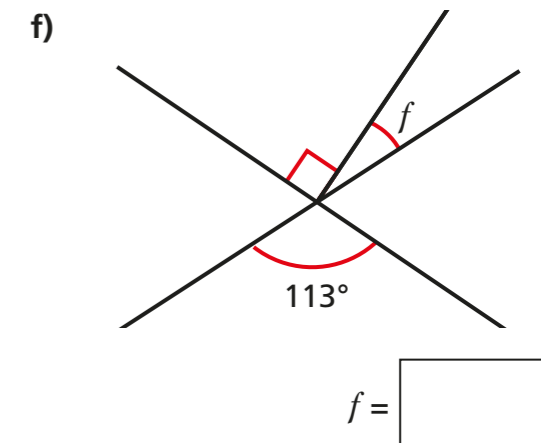
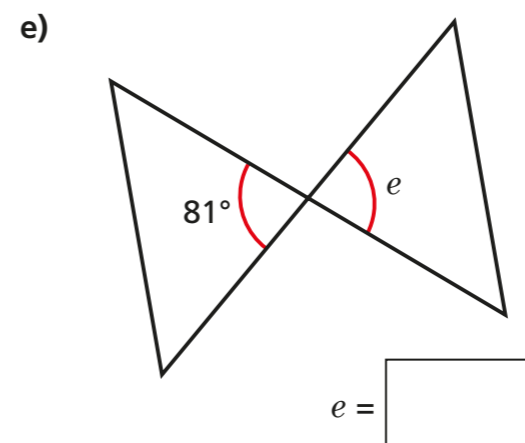
$c =$



$b =$

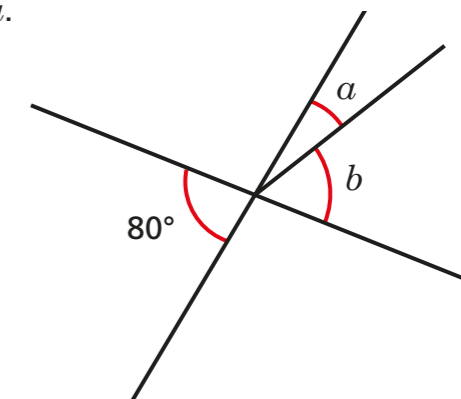


$d =$



Talk about your reasons with a partner.

- 6 Angle b is three times the size of angle a .



Work out the sizes of angles a and b .

$a =$ $b =$

- 7 The diagram shows three straight lines intersecting at a single point. Work out the value of x and y .

$x =$ $y =$

