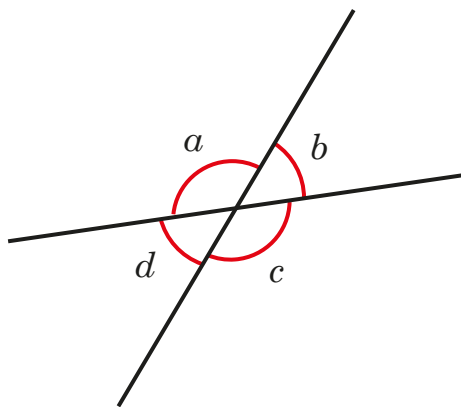


Understand and use the equality of vertically opposite angles

- 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?

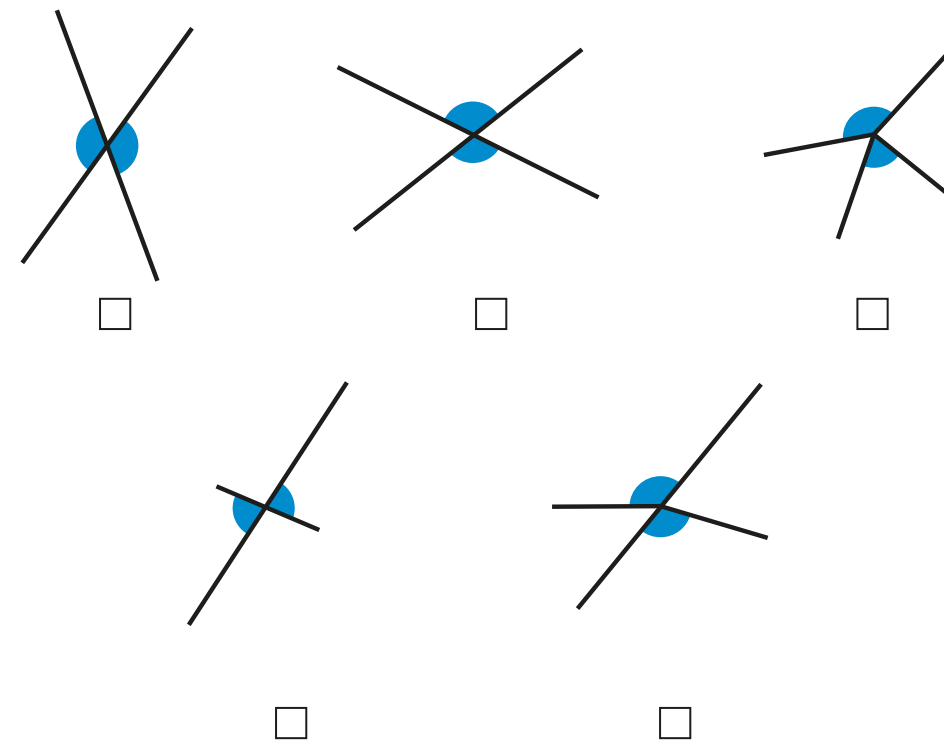
- d) Complete the sentences.

Angles round a point _____

Adjacent angles on a straight line _____

Vertically opposite angles _____

- 2 Tick the pairs of angles that are vertically opposite.

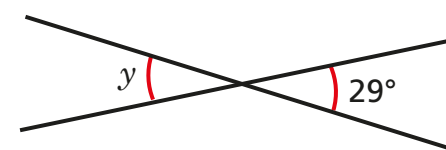


Compare answers with a partner.

- 3 Work out the sizes of the unknown angles.

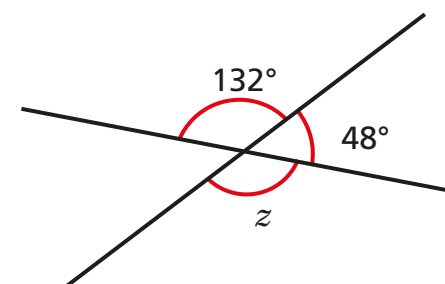
Give reasons for your answers.

- a)



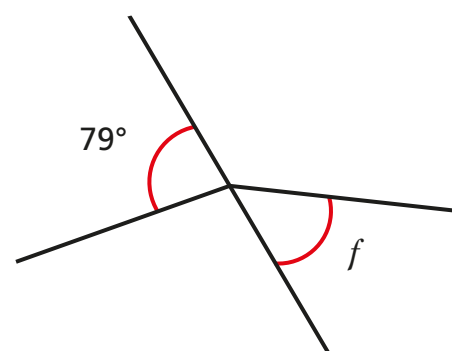
$y =$ because _____

- b)



$z =$ because _____

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



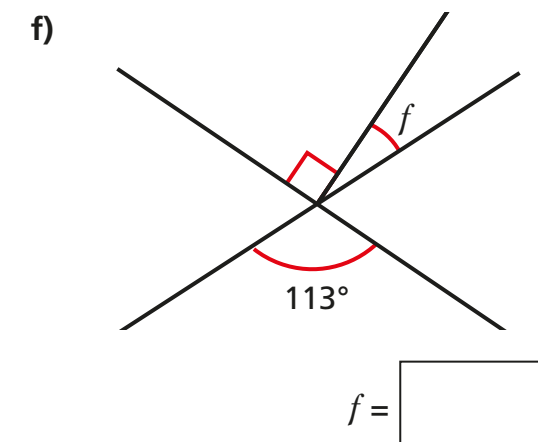
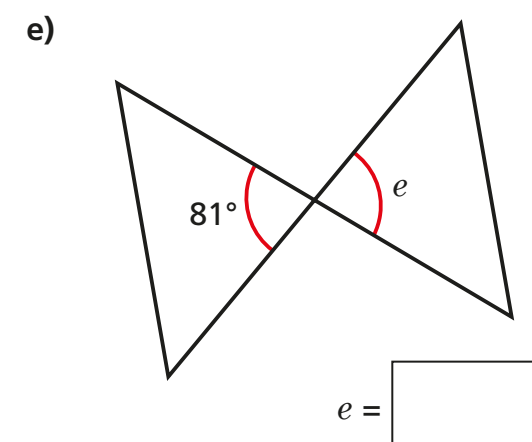
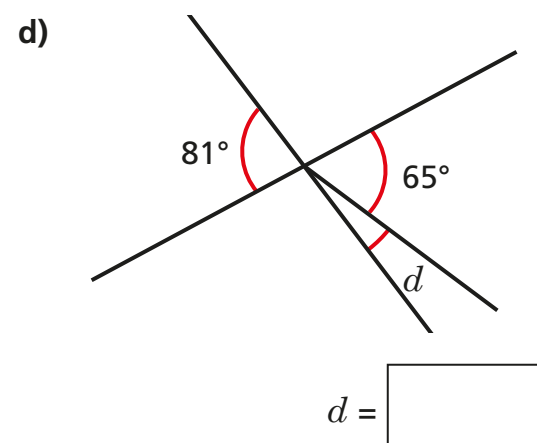
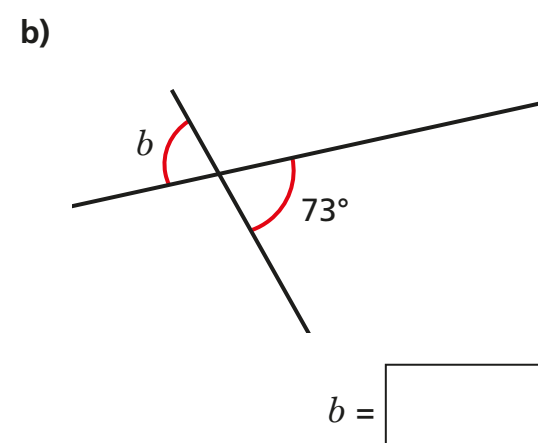
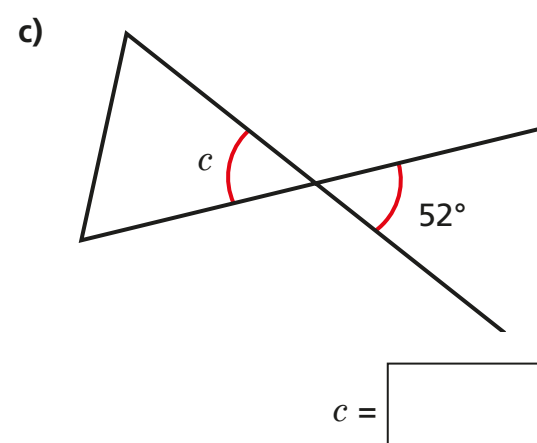
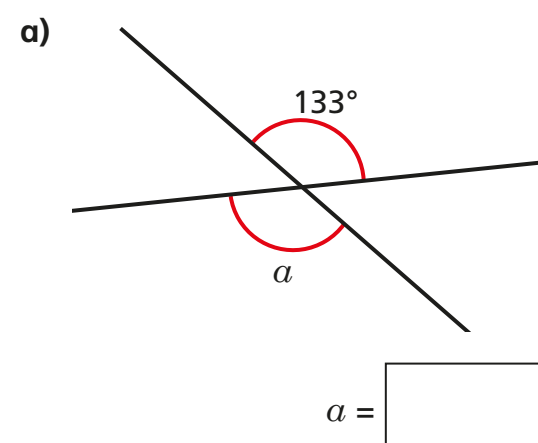
Angle f is equal to 79° because vertically opposite angles are equal.



Do you agree with Whitney? _____

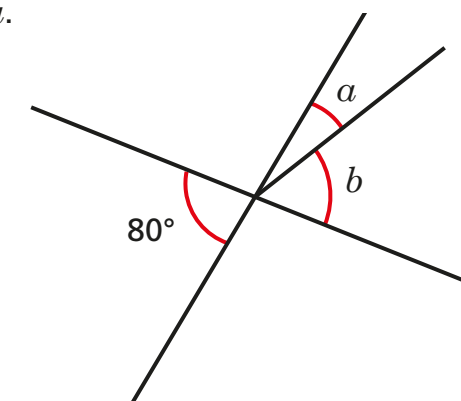
Explain your answer.

- 5 Work out the unknown angles.



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 .

