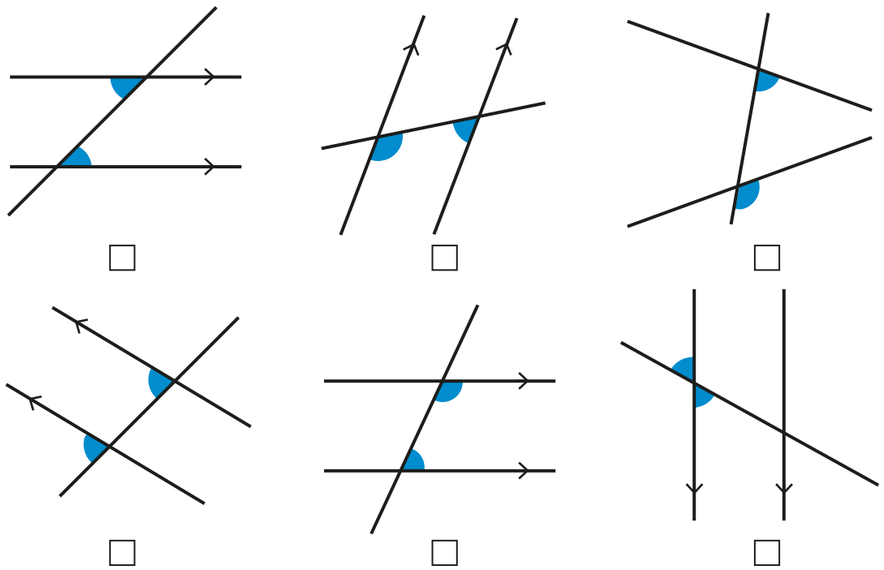
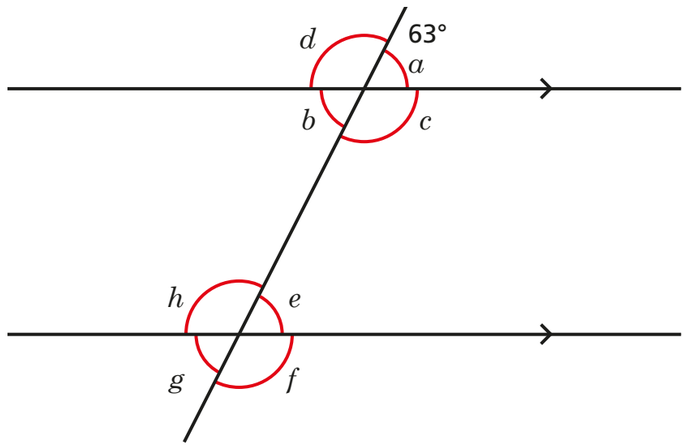
Identify and calculate with co-interior, alternate and corresponding angles

1 Which pairs of angles are equal? Tick your answers.



Discuss your answers with a partner.

2 **a)** Work out the sizes of the unknown angles and label them on the diagram.



b) Angles c and e are co-interior.

What is the sum of angles c and e?

c) Angles b and h are also co-interior.

What is the sum of angles b and h?

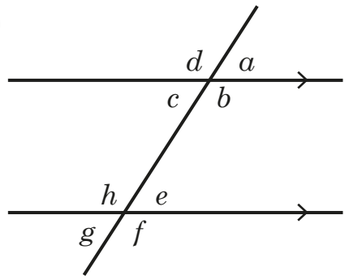
d) What do you notice?

e) Complete the sentence.

Co-interior angles _____

3 Complete the sentences.

a)



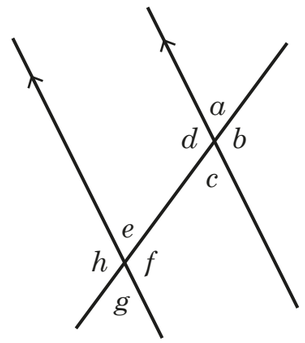
Angles c and _____ are co-interior.

Angles e and _____ are co-interior.

Angles h and _____ are co-interior.

Angles b and _____ are co-interior.

b)



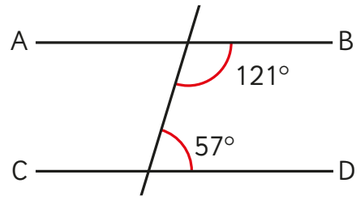
Angles e and a are _____

Angles e and d are _____

Angles e and c are _____

Angles e and g are _____

4 Mo has measured two angles.



a) Are line segments AB and CD parallel? _____

Explain your answer.

_____

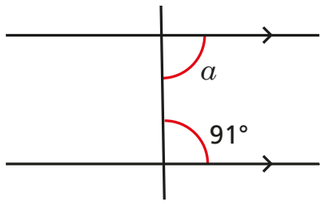
b) Eva says, "I think they could be parallel."

Why might Eva think this?

5 Work out the sizes of the unknown angles.

Give reasons for your answers.

a)

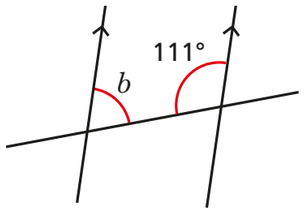


$a =$ ☐ because _____

_____

_____

b)

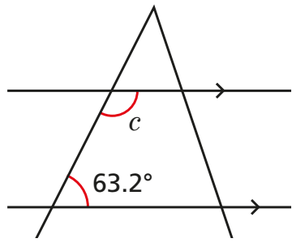


$b =$ ☐ because _____

_____

_____

c)

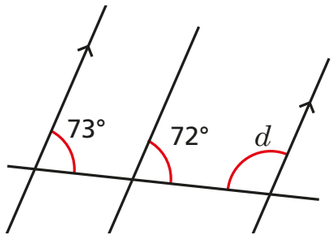


$c =$ ☐ because _____

_____

_____

d)



$d =$ ☐ because _____

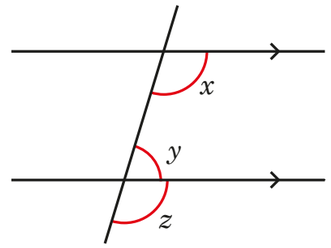
_____

_____

6

$x : y = 2 : 1$

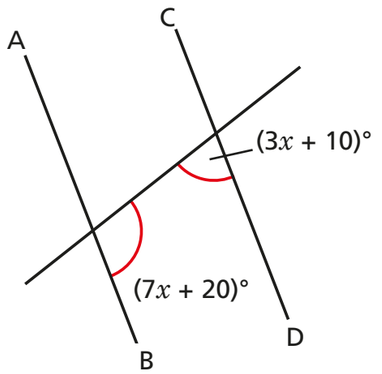
Work out the size of angle z.



$z =$ ☐

Discuss your reasoning with a partner.

7



a) Show that line segments AB and CD are not parallel when $x = 12$

Explain your answer.

_____

_____

b) Line segments AB and CD are parallel. Work out the sizes of the angles and label them on the diagram.

Discuss your method with a partner.