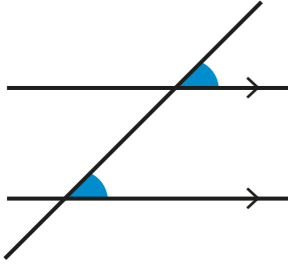
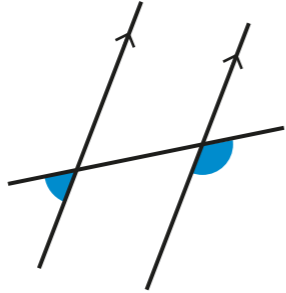


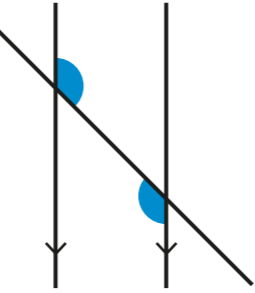
Understand and use parallel line angle rules

H

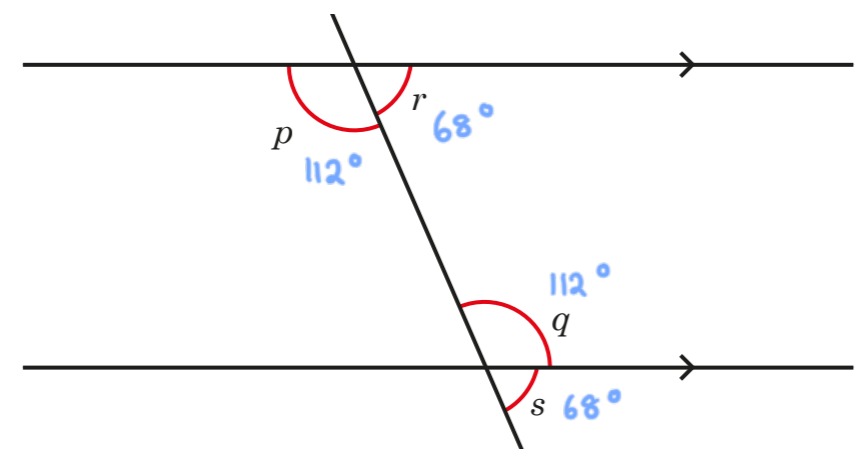
1 Are the pairs of angles alternate, corresponding or neither?

a)  corresponding

b)  neither

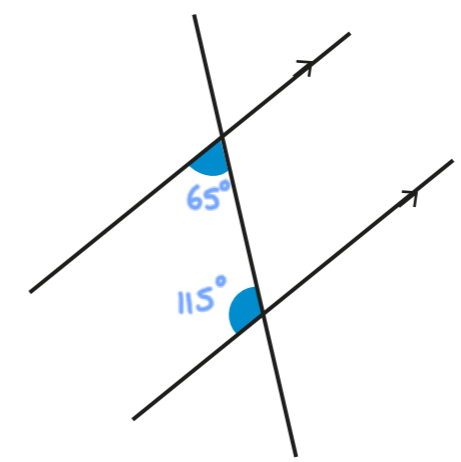
c)  alternate

2 Four angles are labelled on the diagram.



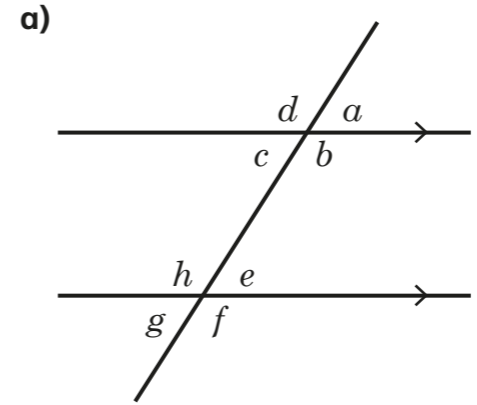
- a) p and q are alternate angles. Measure the size of each angle and label them on the diagram.
What do you notice?
- b) Complete the sentence.
Alternate angles are equal
- c) r and s are corresponding angles. Measure the size of each angle and label them on the diagram.
What do you notice?
- d) Complete the sentence.
Corresponding angles are equal

3 A pair of co-interior angles are shown on the diagram.

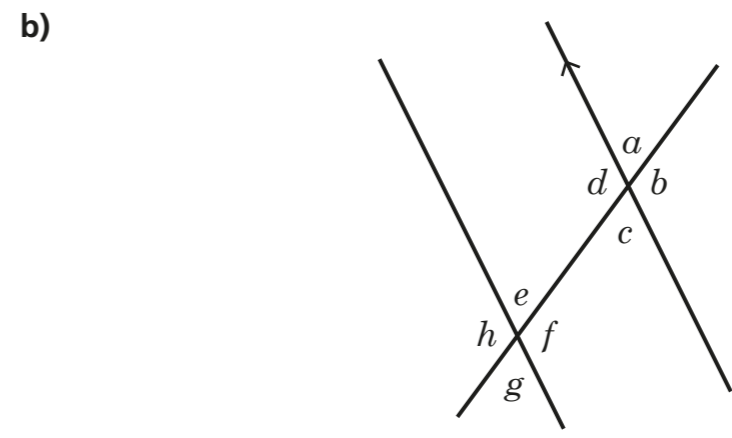


- a) Measure the size of each angle. Label them on the diagram.
What do you notice?
- b) Complete the sentence.
Co-interior angles sum to 180 degrees

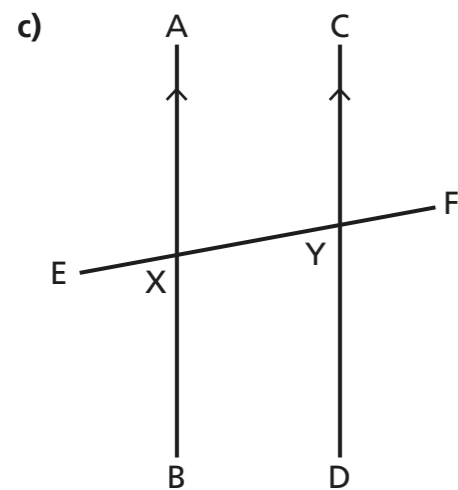
4 Complete the sentences.



- Angle a is vertically opposite angle c
- Angle a is corresponding to angle e
- Angle h is alternate to angle b
- Angle h is corresponding to angle d
- Angle h is vertically opposite angle f

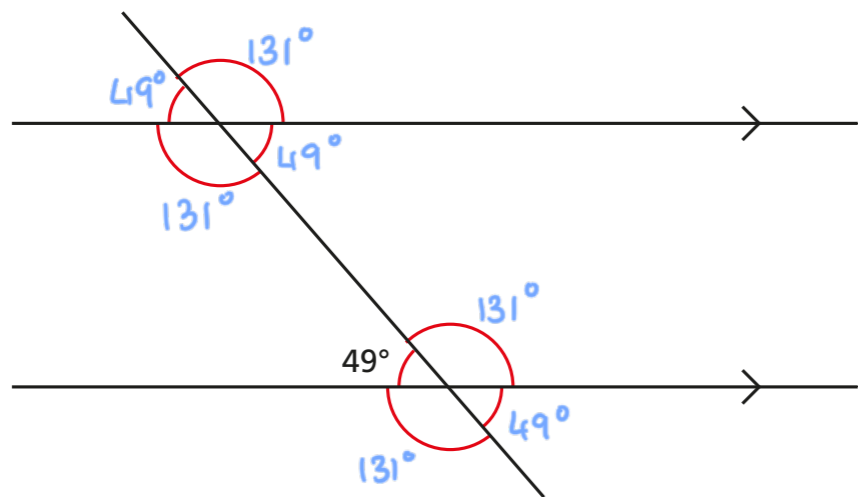


- Angles d and a/c are adjacent angles on a straight line.
- Angles d and f are alternate angles.
- Angles h and d are corresponding angles.
- Angles d and b are vertically opposite angles.



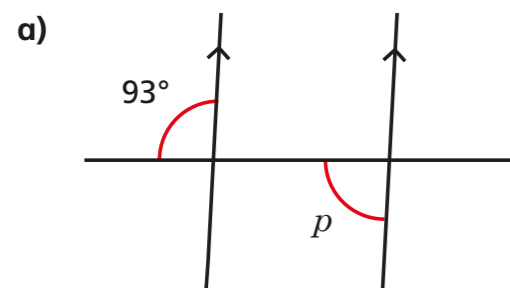
$\angle AXF$ is alternate to $\angle EYD$
 $\angle AXF$ is corresponding to $\angle CYF$
 $\angle DYF$ is corresponding to $\angle BXF$
 $\angle DYF$ is vertically opposite to $\angle EYC$
 $\angle AXF$ and $\angle BXF$ are adjacent angles on a straight line.

5 Work out the sizes of the unknown angles and label them on the diagram.

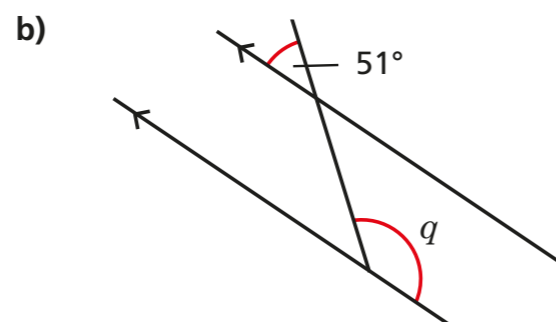


Compare your thinking with a partner.
Did you work them out the same way?

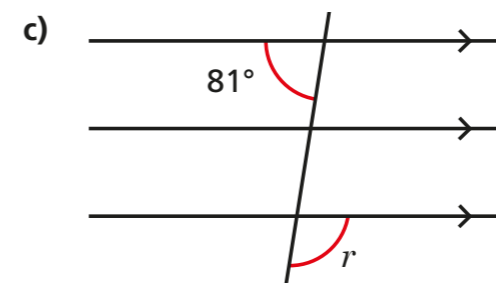
6 Work out the sizes of the unknown angles.



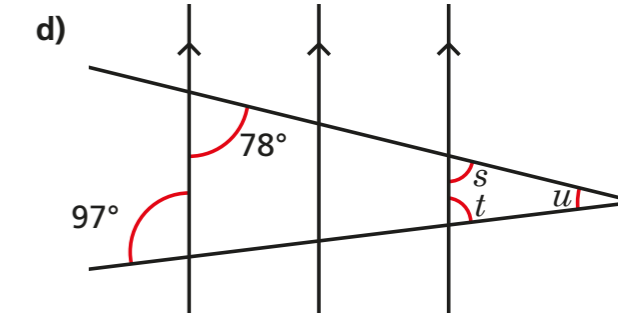
$p = 87^\circ$



$q = 129^\circ$



$r = 99^\circ$

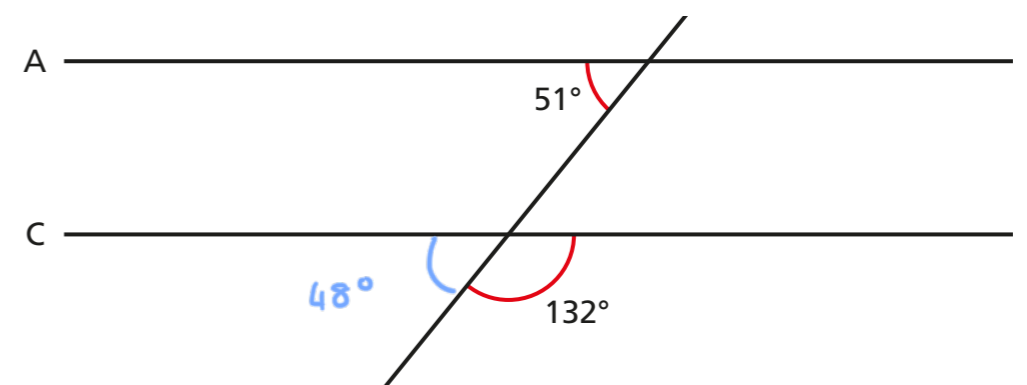


$s = 78^\circ$ $u = 19^\circ$

$t = 83^\circ$

Discuss your reasons with a partner.

7



Are line segments AB and CD parallel? No

Explain your answer.

The corresponding angles are not equal.